



The Effect of Sustainable Finance and Green Innovation on ESG Performance With Foreign Experience CEO as a Moderator

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Abstract

The concept of sustainable ESG performance in companies can have the opportunity to provide various competitive benefits and influence the development of good values. ESG performance can mitigate financial risk during the financial crisis during the COVID-19 pandemic and reduce portfolio risk. In addition, companies that invest in ESG show that the company carries out ethical investment practices and can increase returns (Broadstock et al., 2021), thereby influencing the sustainability of the company and investors. This research aims to examine the influence of Sustainable Finance, Green Innovation, CEOs with foreign experience and the interaction of Sustainable finance and Green Innovation with CEOs on ESG performance using the control variables firm size and company age. The panel regression model is used because the data structure used is a combination of time series data and cross section data. The samples used in this research are companies listed on the Indonesia Stock Exchange in 2018 - 2021 for 2 types of industry, namely the banking sector and the development sector. The sampling technique used was purposive sampling. Based on the specified criteria, 22 mining companies and 34 banking companies were selected so that the total sample used in this research was 224 samples. The results of this research show that both the overall and partial tests of Sustainability Finance (SF) have proven to have a positive effect on ESG performance. Meanwhile, overall green finance has been proven to have no effect on ESG performance, but partially green innovation banking companies have proven to have a positive effect on ESG performance. CEOs with foreign experience have proven unable to moderate the influence of sustainable finance and green innovation on ESG performance. This research contributes to academic and practical literature related to efforts to achieve ESG performance.





Keywords : Sustainable Finance, Green Innovation, CEO Foreign Experience, ESG Performance.

1. INTRODUCTION

The COVID-19 outbreak has had a negative impact on the world economy which can disrupt the smooth running of social and economic activities (Caldecott, 2020). This adverse situation prompted the attention and efforts of governments and economic entities to address the economic and social impacts of the pandemic by restoring sustainability in economic development. The way that companies can contribute to sustainable development during the COVID-19 pandemic and post-pandemic is through the *green economy concept* by including social, economic and environmental dimensions in its practice (Lozano, 2012).

During the pandemic, companies faced strategic decision challenges to balance employee protection and public health against operational costs and financial returns (Parker, 2020; Rinaldi et al., 2020). This makes companies focus more on ESG performance, because it relates to the interests of stakeholders who are directly related to the company. ESG performance can facilitate the company's long-term economic development. The concept of sustainable ESG performance in banking can have the opportunity to provide various competitive benefits and influence the development of good value. Broadstock et al. (2021) found that ESG performance can mitigate financial risk during the financial crisis during the COVID-19 pandemic and reduce portfolio risk. In addition, companies that invest in ESG show that the company carries out ethical investment practices and can increase returns (Broadstock et al., 2021), thereby influencing the sustainability of the company and investors.

With an agency theory approach, stakeholders and the legitimacy of ESG performance are strongly influenced by investment management capabilities, company strategy and government policy. In addition, the innovation theory approach shows that innovation that includes detailed details of the organization and its operating environment can model ideal ESG targets and think about drivers as internal and external forces to improve ESG achievements (Daugaard & Ding, 2022). One of the government policies implemented in the company's strategy is a policy related to sustainable finance. Sustainable finance can be defined as financing to support sectors or activities that contribute to achieving, or improving, at least one of the relevant dimensions of sustainability (Migliorelli , 2021). Economics, social and environmental are actually three different fields, because they have their own characteristics. Different but not impossible to combine. The Financial Services





Authority (OJK) has proven that these three fields can be combined into one concept which is named *Sustainable Finance* or Sustainable Finance. *Sustainable finance* is an approach from the financial services sector to support sustainable development goals and climate change. So, *sustainable finance* is a new approach that considers environmental factors (climate change) and social factors that can increase financial risks for financial institutions. *Sustainable Finance* in Indonesia is defined as comprehensive support from the financial services industry for sustainable growth resulting from harmony between economic, social and environmental interests. In order to support the achievement of the Long Term Development Plan (RPJP) and Medium Term Development Plan (RPJMn), the Financial Services Authority (OJK) on 5 December 2014 published the 2015-2019 Sustainable Finance Roadmap. The roadmap contains a presentation of the sustainable finance program work plan for the financial services industry under the authority of the OJK, namely banking, capital markets and the Non-Bank Financial Industry (IKNB).

Regarding sustainable finance from an investor perspective, the Global Sustainable Investment Review (2018) reports that more than US\$30 trillion was managed in accordance with responsible investment criteria worldwide in 2018. Data shows that ESG investment is more widespread in Europe, but is also experiencing rapid growth in the US in recent years. The US SIF Foundation's 2018 biennial report estimates that assets under management (AUM) based on ESG strategies totaled US\$ 12 trillion (up 38% from 2016). The Principles for Responsible Investment (PRI), the largest global network of institutional investors committed to considering ESG issues in their investment processes, has more than 2,500 signatories with over US\$85 trillion in AUM at the end of 2019. However, the estimate is much more modest if one focuses only on sustainable mutual funds or socially responsible investment funds (SRI funds) and ETFs in the US and Europe, with estimates typically being more low than US\$1 trillion.

Another strategy that can be implemented to achieve sustainable development so that it can help improve ESG performance is the application of innovation used by companies. Based on the *Resource Based View (RBV)* theory, green resource-based innovation or *Green Innovation (GI)* is a technology, product, service, process or management system that can be used to overcome environmental problems such as preventing pollution or enabling waste recycling and includes green product design and corporate environmental management (Chouaibi et al., 2021). GI is useful in changing the way of production and using resources more effectively as well as maintaining the business life cycle. They are able to increase competitiveness and obtain added value for the company (Albort-Morant et al.,





2016; Pan et al., 2021) . GI is a popular concept in the production process to reduce the impact of environmental damage, reflecting the company's commitment to caring for the environment (Duque-Grisales et al., 2020) .

The importance of GI in companies needs to be considered and investigated further because it plays a role in achieving sustainable performance (Rezende et al., 2019) . GI contributes as a powerful tool in reducing concerns about corporate reputation and financial risks related to environmental issues. Previous research relating the role of GIs was dominated by western countries. Research in Finland conducted by Saunila et al., (2018) found that companies implementing GI practices could lead to increased sustainable performance in the form of ESG. Additionally, other research finds that implementing forward-looking GI and diversified business strategies can reduce the protection burden on *stakeholders* , increase social awareness, increase the market share of green products, and ultimately create valuable sustainable competitive advantages for these companies. (Huang et al, 2019). Based on this, identifying GIs in looking at ESG performance practices is important to find out whether environmental management practices and strategic management are clearer.

Apart from that, another problem that needs to be explored at this time is the parties who determine strategies and increase promotion on environmental issues effectively. One solution that can be offered is the role of CEO. The CEO is the most important person on the management board, he has great influence on strategic decisions within the company (Busenbark et al., 2016). Several literatures explain that CEOs who have foreign experience play a big role and influence in improving company activities (Cao et al., 2019; Dai et al., 2018; Giannetti et al., 2015; Iliev & Roth, 2018; Wen et al. , 2020). CEOs who have foreign experience not only increase international knowledge or executive management skills, but also increase general cognitive competencies including creativity, problem solving, leadership, and information processing (Caligiuri & Tarique, 2009; Dragoni et al., 2014). CEOs with foreign experience are also potentially very valuable to the company. This is because CEOs with international experience have valuable foreign knowledge and access to networks that increase the company's competitive advantage in the global market (Piaskowska and Trojanowski, 2014)

upper echelon theory, it is found that CEOs with foreign experience can internalize a high assessment of environmental protection and try to improve the company's environment so that they are able to promote environmental activities (Marquis & Tilcsik, 2013). In addition, previous research shows that foreign experience and competencies





possessed by CEOs can help in the development of green innovation-oriented activities (Dragoni et al., 2014). CEOs who have foreign experience gained in developed countries tend to apply environmental ethics concepts better, especially in corporate social responsibility (CSR) and environmental protection activities (Roberts & Beamish, 2017; Waddell & Fontenla, 2015).

This research will analyze the relationship between *sustainable finance* and *Green Innovation* and company ESG performance. This study also tests the moderating effect of the presence of CEO foreign experience. With control variables company size and company age.

In this research, company size is seen from the larger the company size, the company will have more resources, including to be allocated to activities that support ESG achievement so that it can produce better performance (Broadstock et al., 2021). Thus, in this study, it is predicted that company size has a positive relationship with the company's ESG performance. Company age can influence the composition of *sustainability* finance components, companies that have been around for a long time have more time to carry out sustainable activities based on the environment and green innovation (Liu et al , 2022). Therefore, the expectation from this research is that company age has a positive relationship with the company's ESG performance.

Sustainability finance plays an important role in sustainable development goals (SDGs). Sachs et al. (2019) found that *sustainability finance* has a positive role in environmental solutions and also helps to achieve sustainable development goals. The banking sector is one that provides *sustainable finance* to the social or commercial sector so that it can accelerate and maintain high levels of economic growth (Dalia and Vitaliy, 2021). This banking sector has an effect on social and economic development from the existence of *green finance as a form of sustainable finance* (Zhou et al, 2020).

The above statement is in line with stakeholder theory explaining that companies can meet the environmental demands of stakeholders and increase organizational efficiency to adapt to changes in the external environment, which is conducive to improving the company's reputation and establishing long-term relationships with suppliers and customers, thereby leading to improved financial performance. Of course, this means that *green finance* has a positive influence on the performance of green companies. This is in line with research by Jha and Bakhshi (2019) regarding the role of *green finance* in moving the economy towards sustainable development. Liu et al. (2020) conducted research to examine the role of green finance in the development of the green economy and sustainable development in China.





Green finance becomes one of the effective tools for achieving green economic growth and structural transformation and the use of green finance can actively facilitate the green transition, especially in the COVID-19 era (Wang and Wang 2021). Nowadays, *green finance* has become a vital pillar of the green economy to effectively achieve a win-win situation of sustainable green evolution in establishing the concept of green development. During the COVID-19 pandemic, financing projects in the form of *green finance* can provide clear policy implications for hedging and investment strategies (Tiwari, Abakah, Gabauer, and Dwumfour, 2022). Previous literature also suggests green finance as a form of strategy to secure economic development that has the potential to develop the economy and provide more opportunities (Asongu and Odhiambo, 2020). This is because countries that are starting to develop significant products with strong measures to increase wealth and overall economic growth often need financial sustainability. Therefore, green finance during COVID-19 can play an important role in the effectiveness of targeted activities and help countries improve the quality of life (Shair et al., 2021).

In addition, preparing a *green finance system development plan* can send a positive signal to the public because it can provide basic guarantees to increase green financial growth. Based on this, the hypothesis of this research is:

H1: Sustainability Finance has a positive effect on ESG Performance

Based on RBV theory, GI is a resource in the form of innovation consisting of new or modified processes, practices, systems and products that are beneficial to the environment and contribute to environmental sustainability (Oltra and Saint Jean, 2009) . Currently, GI is increasingly emphasized by policy makers and academics in solving environmental problems because it can increase company sustainability. In aligning with company needs, GI can also be used as a unique tool for marketing activities to continuously increase market share (Küçükoğlu and Pınar, 2015) . This is in line with research by Rezende et al., (2019) which found that GI will show an increase in performance in the following years. As a result, GI can positively influence the performance of environmentally sensitive companies (Sezen and Çankaya, 2013; Tseng et al., 2013; Zhang et al., 2020) .

In view of legitimacy theory, companies that contribute and innovate in GI will easily align values, policies and strategies in developing business without violating government regulations Mousa, et. al., (2015) . As a strategy, GI will encourage companies to have special capabilities that can be an important source of competitive advantage in achieving company





profits (Ferreira et al., 2010) . These profits are achieved because companies are able to provide environmental promotion and explore GIs that can eliminate or reduce environmental damage which leads to competitive advantage (Pedersen et al., 2018; Zhang et al., 2019) . Even the allocation and direction of resources always refers to improving ESG performance (Chouaibi et al., 2021; Reber et al, 2021) . This is why GI can be a key factor in achieving strategic competitiveness and profitability (Gürlek and Tuna, 2018; Harel et al., 2020) .

During the COVID-19 pandemic, research from Awawdeh et al. (2022) found that there was a significant positive influence from the implementation of innovation on company performance during the COVID-19 pandemic. Then research from Zhou et al. (2022) also shows that the implementation of innovation largely supports green economic growth through investment and green loans. Simultaneously, companies by optimizing corporate environmental innovation activities can help companies maintain sustainable development and can send positive signals to the market in improving the quality of ESG performance (Zhang et al , 2022). Based on this, the hypothesis in this research is

H2: *Green Innovation* has a positive effect on ESG performance

CEOs with foreign experience in developed countries are more likely to promote green innovation. Corporate activities oriented towards CSR activities are influenced by the CEO's personality in the form of foreign experience (Kim et al., 2018). A CEO with more international experience will benefit the company in strategic decision making (Azam et al., 2018). International experience has been studied in various organizational contexts and found to influence a company's activities and achievements (Shahab et al., 2019). CEOs can use their global networks to get advice or help with problems.

In addition, upper echelon theory shows that the CEO plays an important role in the decision-making process which ultimately influences company performance (Hambrick, 2007; Hambrick & Mason, 1984). Foreign CEOs in local companies have the potential to understand and align the company's strategic goals and targets according to institutionally directed environmental and sustainable regulations. Companies are increasingly responsible to stakeholders, so considering sustainability become aware of societal concerns, comply with international laws and regulations and adopt international approaches including the Sustainable Development Goals, which in turn allows them to remain profitable (Moyer and Hedden, 2020)





The more experienced a person is, the more they will understand their work and responsibilities so they can make more focused decisions based on the experience they have had. When a CEO is very experienced, it is hoped that he can improve his performance as CEO so that he can generate greater profits for the company. Based on *upper echelons* theory, a CEO's experience can influence the strategy taken by the CEO.

From a stakeholder theory perspective, the relationship between directors and ESG disclosure aims to assist managers in improving the company's image by providing benefits to stakeholders. The Board of Directors has an important position in this regard to establish good relations with stakeholders, including by meeting stakeholder needs. The CEO not only improves performance from a financial perspective but also as a company that cares about the environment.

Thus, a high percentage of CEOs in the world believe that sustainability issues are important for companies (Lacy et al., 2010), and CEO characteristics are one of the factors that can influence strategic decision making, especially in the green concept of green finance implemented by companies. This raises the suspicion that the presence of a CEO with foreign experience can strengthen green finance strategies in influencing the level of ESG performance carried out by the company.). As the core of the executive team, the CEO's efforts regarding ESG disclosure should be a key determinant of disclosure quality. So, it is hoped that the increase in company performance demonstrated through ESG performance will be stronger with the presence of a CEO with greater foreign experience, because stakeholders will then see the signaling effect (signalling theory) of ESG performance into a greater commitment from the company to green implementation. finance.

H3: CEO foreign experience can strengthen the influence of *sustainable finance* on ESG performance

upper echelons theory, the demographic characteristics of CEOs. Foreign experience greatly influences a company's strategic decisions, such as the company's environmental performance. CEOs who have foreign experience have unique values while abroad and can provide different perspectives for decision making and are able to promote sustainable development activities within the company. In supporting operational activities and encouraging companies to formulate *green innovation strategies*, companies always increase managers' awareness of environmental protection, including the role of CEOs with foreign experience. In research by Wen and Song (2017) and Zhang et al. (2018) found some





evidence that returning managers/directors direct their companies to invest more in CSR activities. Therefore, CEOs with foreign experience may be more likely to promote green innovation due to their increased environmental ethics.

Green innovation is part of a proactive company strategy in increasing competitive advantage in the market. When a company develops the potential resources possessed by a CEO with foreign experience, it can integrate organizational resources in the form of increased *green innovation* which can strengthen organizational identity (Quan et al, 2021). This shows the company has valuable resources enabling the company to increase resource productivity, and expand its market share becomes a better company (Porter and Van Der Linde, 2017) .

During the COVID-19 pandemic, companies that implement ESG practices can control market share. In implementing this practice, there is a need for corporate encouragement in the form of *green innovation* for companies to be able to improve ESG ranking performance and significantly reduce financing costs, increasing the company's overall competitiveness. , and helped gain more market share during the COVID-19 pandemic (Tang et al, 2022). Companies that practice *green innovation* certainly have good ESG performance in meeting stakeholder requirements because they can incur lower financing costs and have a larger market share. Then, in improving company performance from implementing ESG during the COVID-19 pandemic, the CEO's ability will be able to effectively assess future prospects to increase *green innovation* (Liu et al, 2022) .

Therefore, the impact of GI on ESG performance depends on the role of the CEO's foreign experience. With a better GI due to the presence of a CEO with foreign experience. This is because *green innovation practices* can bring business models to a higher level of environmental sustainability to promote environmental protection and sustainable development (Triguero et al., 2013) . When a CEO with foreign experience has high capacity, implementing GI can help the company gain a good view from stakeholders (Wen and Song, 2017; García-Granero et al., 2018) . Based on this, the hypothesis in this research is:

H4: CEO foreign experience can strengthen the influence of *green innovation* on ESG performance

The proposed conceptual model based on the hypothesis is shown in Figure 1.



According to Sekaran & Bougie (2016) the theoretical framework is the foundation underlying the entire research project. From the theoretical framework, testable hypotheses are formulated to find out whether the theory formulated is valid or not. Then, this theory will be measured with correct statistical analysis. Referring to theory and previous research, a relationship was found between variables including: Sustainability finance, green innovation and sustainability performance. With the moderating variable CEO foreign experience and company size and company age as control variables. Then, the author has created a research model as in Figure 1 below:

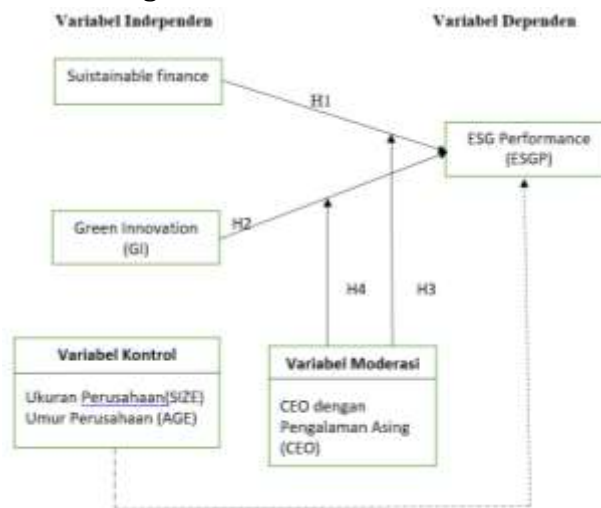


Figure 1. Research Model

2. METHOD

The type of research used is quantitative research using hypothesis testing which aims to test the influence of Sustainability Finance, Green Innovation, CEOs with foreign experience and the interaction of Sustainability Finance and Green Innovation with CEOs on ESG performance using the control variables firmsize and company age. The panel regression model is used because the data structure used is a combination of time series data and cross section data

The variables used consist of the dependent variable, namely the ESG index, the independent variable, namely Sustainability Finance and Green Innovation and 2 control variables, namely company size and company age. The measurement of each variable can be explained as follows



Table 1 Variable Measurement

Variable	Information	Measurement	Data source
Dependent Variable			
ESGP	ESG Performance	GRI disclosure score/index .	Sustainability Report, Annual Report, Web, Other information on company activities
Independent Variable			
Sustainability Financing	POJK 51	Content analysis by giving a value of 1 if the component is disclosed and 0 if it is not disclosed.	Sustainability Report, Annual Report, Web,
Green Innovation (GI)	Green Innovation	Content analysis by giving a value of 1 if the component is disclosed and 0 if it is not disclosed. Then divide the number of items disclosed from the total items by a maximum of 10	Sustainability Report, Annual Report, Web, Other information on company activities
Moderating Variables			
CEO	Foreign Experience CEO	Dummy variables, 1 if the CEO has experience studying or working abroad, and 0 otherwise	Annual Report
Control Variables			
SIZE	Company Size	Natural logarithm of a company's total assets	Annual Report
AGE	Company Age	Company age in the observation period	Annual Report, Company Website





The samples used in this research were companies that went public on the Indonesia Stock Exchange for 2 types of industry, namely the banking sector and the development sector. The sampling technique used was purposive sampling, namely samples were taken using the following criteria: 1) Registered on the Indonesian stock exchange, 2) Consistently registered during the 2018-2021 period, 2) Published a complete annual report and sustainability report. Based on the above criteria, 22 mining companies and 34 banking companies were selected so that the total sample used in this research was $(22+34) \times 4$ years, namely 224 samples.

The data analysis method used is a panel data regression model with processing stages consisting of 1) estimating three panel models, namely the common effect model (CEM), fixed effect model (FEM) and random effect model (REM); 2) carry out a model selection test, namely the Chow test to choose whether the right model is CEM or FEM followed by the Hausman test (if the Chow test is selected FE) with the aim of choosing whether the right model is FEM or REM) or LM testing (if the results Chow testing selected CEM) with the aim of testing whether the correct model is CEM or REM

3. RESULTS AND DISCUSSION

3.1 Results

Descriptive statistics of the research variables can be seen in table 2. For the ESG disclosure variable, the overall achievement of the ESG index has a relatively low average value, namely 31.93%, where mining companies have greater ESG disclosure than banking companies, namely 48.68%. compared to banking at 21.10%. Relatively large standard deviations either overall or by sector group indicate that there are heterogeneous variations in ESG values between one company and another.

Descriptive statistics for the Sustainable Finance variable produces a relatively low index, namely having an average value of 8.64%, where for the mining sector the average value is 21.97%, while for the banking sector it is still very low, namely only 0.02%. Overall, Green Innovation produces a low average score of 37.64%. If viewed according to sectoral groups, companies included in the mining sector group have a greater average Green Innovation value, namely 62.38% compared to the banking sector which has an average value of 21.63%.

The results of descriptive statistical processing for company age show that the average age of companies operating on the Jakarta Stock Exchange is 24.76 years, where





mining companies have an average company age of 35.81 years, while the banking sector has an average age of 17.61 years.

Descriptive statistics for company size (size) which is proxied from the log of total assets shows that the overall average firm size is 8.30 with mining companies having a larger firm size compared to the banking sector, namely each having an average value of 9.12 for companies included in the mining sector and 7.77 for companies included in the banking sector group.

Table 2. Descriptive Statistics of Research Variables

Sector		N	Mean	Std. Deviation	Minimum	Maximum
ESG	Mining	88	48.68	24,439	0.00	85.00
	Banking	136	21.10	26,219	0.00	76.00
	Total	224	31.93	28,834	0.00	85.00
SF	Mining	88	21.97	23,069	0.00	70.00
	Banking	136	0.02	0.062	0.00	.20
	Total	224	8.64	17.97	0.00	70.00
G.I	Mining	88	62.38	10.39	40.00	90.00
	Banking	136	21.63	8.49	1.00	37.00
	Total	224	37.64	21.99	1.00	90.00
AGE	Mining	88	35.81	19.84	6.00	102.00
	Banking	136	17.61	8.38	3.00	39.00
	Total	224	24.76	16.59	3.00	102.00
size	Mining	88	9.12	3,946	5.16	17.40
	Banking	136	7.77	0.73	6.57	9.24
	Total	224	8.30	2.61	5.16	17.40

Source: processed data

Descriptive statistics of the CEO variable which has a nominal measurement scale are shown in table 3. Information from the table shows that overall 69.6% of CEOs have experience abroad either due to college or work experience and only 30.4% have no experience abroad. country. Viewed by sector, in the mining sector 75% of CEOs have experience abroad, while in the banking sector only 66.2% have experience abroad.



Table 3. Descriptive Statistics for CEO variables

Sector Group/ CEO		CEO		Total	
		Have no experience in LN	Have experience in overseas		
Industry	Mining	Count	22	66	88
		% within industry	25.0%	75.0%	100.0%
	Banking	Count	46	90	136
		% within industry	33.8%	66.2%	100.0%
Total		Count	68	156	224
		% within industry	30.4%	69.6%	100.0%

Source: processed data

The results of selecting the panel model used for the overall model, mining sector model and banking sector model are shown in table 4. From the Chow test it can be concluded that the selected model is FEM because it produces a p-value from the chisquare cross section of $0.000 < 0.05$ which is good for the model . overall, mining sector model and banking sector model

Table 4. Chow Test

Model	Chisquare cross section	P-value	Conclusion
Overall	364,798	0,000	FEM
Mining	130,330	0,000	FEM
Banking	220,524	0,000	FEM

Source: processed data

Hausman test was carried out for the three models because the Chow test results selected FEM. The processed results for the Hausman test can be seen in table 5. U Information from the table shows that for both the overall model, the mining sector model

and the banking sector model, it is concluded that the selected capital is FEM because it produces a p-value from a random cross section < 0.05 for the three models used.

Table 5. Hausman Test

Model	Random cross section	P-value	Conclusion
Overall	32,264	0.0000	FEM
Mining	18,543	0.0097	FEM
Banking	25,730	0.0006	FEM

Source: processed data

The results of theoretical hypothesis testing for the three models are shown in table 6. To test the fit model using the coefficient of determination (R²) it is concluded that the resulting model has goodness of fit, as shown by the R² value close to 1, namely 0.9868 for the overall model, as large as 0.9691 for the mining sector model and 0.8759 for the banking sector. For global testing, namely the F test, it is concluded that it is proven that there is at least one independent variable that has a significant effect on the dependent variable as shown by the p-value of the F statistic < 0.05 in both the overall model, mining sector capital and banking sector model.

The results of testing hypothesis 1 (H1) show that overall Sustainability Finance (SF) is proven to have a positive effect on ESG Performance as shown by the estimated coefficient value of 0.147 with a p-value of $0.0251 < 0.05$. For the SF mining sector model, it has also been proven to have a positive effect on ESG performance as shown by the estimated coefficient value of 0.08 with the p-value of the t statistic being $0.0195 < 0.05$. For the banking sector, it is not proven that SF has a positive effect on ESG performance because it produces an estimated coefficient with a negative sign, namely -0.5023

Testing hypothesis 2 (H2) for the overall model produces an estimated coefficient value of -0.262, which means that the hypothesis that green innovation has a positive effect on ESG performance is not proven. In the mining sector, an estimated coefficient value of 4.924 was obtained with a p-value of $0.4067 > 0.05$, which means that H₀ is accepted so that the hypothesis that GI has a positive effect on ESG performance is not proven. In the banking sector model, an estimated coefficient value of 66.19 was obtained with a p-value from the t statistic of $0.000 < 0.05$, which means that H₀ is rejected and H_a is accepted, so it can be concluded that it is proven that GI has a positive effect on ESG performance.



Moderation testing requires that the moderating variable must be significant to the dependent variable (Memon et al, 2019). From the processing results for both the overall model, the mining sector model and the banking sector model, it was concluded that the CEO variable produced a p-value > 0.05 for the three models so it can be concluded that it is not proven that CEO is a good moderator variable for FS and GI on Performance. ESG. These findings indicate that H3 and H4 proposed in this study are not proven.

4. DISCUSSION

Sustainability finance can be financing to support sectors or activities that contribute to achieving, or improving, at least one of the relevant dimensions of sustainability (Migliorelli, 2021). *Sustainable finance* is an approach from the financial services sector to support sustainable development goals and climate change. So, *sustainable finance* is a new approach that considers environmental factors (climate change) and social factors that can increase financial risks for financial institutions. *Sustainable finance* in Indonesia is defined as comprehensive support from the financial services industry for sustainable growth resulting from harmony between economic, social and environmental interests. *Sustainability finance* plays an important role in sustainable development goals (SDGs). Sachs et al. (2019) found that *sustainability finance* has a positive role in environmental solutions and also helps to achieve sustainable development goals. The banking sector is one that provides *sustainable finance* to the social or commercial sector so that it can accelerate and maintain high levels of economic growth (Dalia and Vitaliy, 2021). This banking sector has an effect on social and economic development from the existence of *green finance as a form of sustainable finance* (Zhou et al, 2020).

The above statement is in line with stakeholder theory explaining that companies can meet the environmental demands of stakeholders and increase organizational efficiency to adapt to changes in the external environment, which is conducive to improving the company's reputation and establishing long-term relationships with suppliers and customers, thereby leading to improved financial performance. The results of this research prove that Sustainability Finance (SF) has a positive effect on ESG performance, supporting previous research and stakeholder theory. If viewed partially, for the mining sector model SF is also proven to have a positive effect on ESG performance, however for the banking sector it is not proven that SF has a positive effect on ESG performance. This is because the age of the companies in the banking sector sampled in this research is relatively younger than the mining sector. Apart from that, the research sample also used all banks in book





categories 1 to 4 according to Bank Indonesia, so the sample also included banks that had capital in the category below 5 trillion rupiah. Banks with capital below 5 trillion rupiah have not yet focused on financing that supports ESG, because they still need funds for the bank's main operations.

Innovation theory and *resource based view theory* are not supported by the results of this research. The results of this research show that overall green innovation in mining companies and banking companies has no effect on ESG performance. If seen partially, green innovation in banking companies has a positive effect on ESG performance, but green innovation in mining companies has no effect on ESG performance. This is due to the support of government policies carried out by the OJK which supports banks to create products that support the achievement of ESG performance which is classified as green finance and sustainable finance, by channeling financing to activities that support environmental improvement. One of the government supports is the publication of the 2015-2019 Sustainable Finance Roadmap. The roadmap contains a presentation of the sustainable finance program work plan for the financial services industry under the authority of the OJK, namely banking, capital markets and the Non-Bank Financial Industry (IKNB). Meanwhile, a mining company is a company whose operational nature is a company that exploits a lot of natural resources and the effects cause environmental damage. And it takes a lot of effort and huge costs for mining companies to create innovations consisting of new or modified processes, practices, systems and products that are beneficial to the environment and contribute to environmental sustainability .

Overall test results for mining and banking companies cannot prove that CEOs who have experience studying or working abroad are good moderator variables for sustainable finance and green innovation on ESG performance. Meanwhile, partially the experience of studying and working abroad in banking companies is able to strengthen the influence of sustainable finance and green innovation on ESG performance. In this study, the CEO's experience in a foreign country was not categorized as to whether the experience was for study or work. Experience working or studying in a foreign country can have a different influence on a CEO's mindset regarding the development of company policies and decisions related to supporting ESG performance. Apart from that, this research also did not look at how long the CEO's experience was studying or working in the foreign country. The longer a CEO's experience abroad can increase changes in thinking patterns that will influence decision-making patterns related to policies that support ESG performance. Company size and company age have been proven to have a positive effect on achieving ESG performance.





5. CONCLUSION

5.1 This research contributes

The research results show that sustainable finance has a positive effect on ESG performance, both overall and partially for mining and banking companies. Green innovation as a whole has no effect on ESG performance. However, partially green innovation in banking companies has a positive effect on ESG performance. The CEO's experience of studying and working abroad as a whole is unable to moderate the influence of sustainable finance and green innovation on ESG performance. However, partially, in banking companies the CEO's experience of studying or working abroad can strengthen the influence of sustainable finance and green innovation on ESG performance.

For further research, it is recommended to take a sample of banking companies that fall into book categories 3 and 4 according to Bank Indonesia only, because in this category banks have quite large basic capital of more than 5 trillion rupiah so they are expected to be able to set aside more budget for policies that support the achievement of ESG performance. Apart from that, further research should also categorize the CEO's experience abroad to study or work, and also categorize the length of experience studying and working abroad. Because the influence of the type of activity and length of experience abroad can influence the CEO's insight, which will later influence the mindset and policy patterns implemented in the company.

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