

The Influence of Chief Executive Officer Characteristics on Biodiversity Disclosure

Putri Azizah Nur Khasanah^{1,*}, Rita Wijayanti²

^{1,2} Faculty of Economics and Business, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

Abstract

Purpose: This study aims to analyze how biodiversity disclosure can be influenced by CEO characteristics, which are proxied by CEO age, education level, environmental knowledge, and international experience.

Methodology: This research uses secondary data obtained from sustainability reports and annual reports of non-financial companies listed on the Indonesia Stock Exchange during the period 2020–2022. The sample consists of 232 companies selected using the purposive sampling method. The methodology used in this study is multiple regression analysis, which is quantitative.

Results: The results of the study show that CEO age, company size, profitability, and environmental certification have a positive impact on biodiversity disclosure. However, CEO education level, environmental knowledge, international experience, and leverage do not affect biodiversity disclosure.

Applications/Originality/Value: This study finds that the role of the CEO is significant in initiating biodiversity disclosure activities in companies. CEO decisions play an important role in adopting better biodiversity disclosure practices. Therefore, companies may consider appointing more mature CEOs to support the improvement of environmental disclosure.

Introduction

Environmental problems have emerged as a crucial concern within the contemporary global economy, especially due to cases of environmental pollution that have a negative impact on social life. Environmental pollution occurs when unwanted changes occur in the environment, which can affect human activities, health, and biodiversity. Until now, the threat of extinction of flora and fauna species worldwide has been increasing. According to data released by the International Union for Conservation of Nature (IUCN) in 2022, more than 42,100 plant and animal species are threatened with extinction. This number only covers 28% of the total assessed species and is likely to increase. IUCN also shows species that have shown a significant decline in population, such as amphibians by 41%, birds by 13%, mammals by 27%, coral reefs by 36%, reptiles by 21%, and cycads by 69%. This threat of extinction also occurs in Indonesia, with a decrease in the population of surviving species (IUCN, 2022).

Indonesia is one of the megadiverse countries and has a very high or even the highest biodiversity potential in ASEAN and beyond. However, it has a high risk of losing its biodiversity (Von Rintelen et al., 2017). Habitat degradation and fragmentation, alterations in the landscape, overexploitation, pollution, climate change, invasive species, forest and land fires, and Indonesia's economic and political crises constitute the primary factors influencing the loss of biodiversity and species extinction in the country (CBD, 2014).

In Indonesia, industrial activities still require attention from the government because many companies do not take environmental issues seriously (Purwandani & Michaud, 2021). The lack of environmental management regulations enforced by the government also causes many companies to exploit natural resources on a large scale. In this situation, it is very important for companies to address this issue by implementing stricter environmental management regulations. Companies should also adopt sustainable and environmentally responsible business practices. Corporate responsibility for environmental assets is very important to maintain social welfare and economic sustainability (Jayanti et al., 2022).

Sustainability reports are a means for companies to communicate their environmental responsibility. A sustainability report is a manifestation of corporate responsibility that takes into account social, economic, and environmental dimensions (Damayanti & Hardiningsih, 2021). Companies must maintain investor trust by considering social and environmental aspects. The better a company presents its sustainability report, the more it enhances its image in the eyes of the public. Thus, companies can build public trust and strengthen their image (Thomas et al., 2020). The disclosure of environmental responsibility through sustainability reports is an important tool for companies to meet public expectations and contribute to overall environmental sustainability.

* Corresponding author: putriazizah.pa53@gmail.com

Basically, companies are human-made entities that do not have the ability to run themselves. Therefore, individuals with the intention and awareness to manage the company in accordance with stakeholder expectations are needed (Lewis et al., 2014). This includes disclosing adequate environmental information to communicate the positive impact of the company on the environment and sustainable development. In efforts to succeed in disclosing information by a company, it is highly influenced by the characteristics of the CEO.

The age of the CEO is one of the characteristics that can potentially influence the disclosure of biodiversity in a company. According to Darmadi (2011), age can be used as an indication of the level of experience and tendency to take risks. Another characteristic that has an impact on the disclosure of information by a company is the education level of the CEO. CEOs with a high educational background are considered capable of finding effective solutions in facing complex decisions, as they are deemed to have high thinking ability, decision-making capacity, ability to deal with ambiguous situations, and a tendency to accept innovation (Chua et al., 2022).

Furthermore, environmental knowledge and international experience are also characteristics of the CEO that can potentially influence the disclosure of information by a company. A CEO who has a deeper understanding of environmental issues will positively increase their awareness and understanding of the importance of disclosing environmental information (Amore et al., 2019). Supported by extensive international experience, a CEO will be more likely to be active and take the initiative in disclosing environmental information due to their deep understanding of environmental issues (Walls & Berrone, 2017).

Studies on biodiversity disclosure have found varying results. Dutta & Dutta (2023) research suggests that companies with poor environmental performance may decide to report information on biodiversity for legitimacy purposes. Hambali & Adhariani (2022) research indicates that the size of the board of commissioners has a positive impact on the disclosure of biodiversity by companies. In Haque & Jones (2020) study, gender differences on the board of directors were positively related to the disclosure of biodiversity initiatives and the assessment of biodiversity impacts by companies. Additionally, Gaia & Jones (2020) state that the characteristics of the local board have a significant impact on the level of biodiversity disclosure.

The limitations in previous studies empirically examining the role of CEOs in determining the level of biodiversity disclosure have been a relevant topic in the environment-related literature, including on an international scale. As far as the researcher is concerned, there is no specific research in the literature that examines the role of CEO characteristics in biodiversity disclosure. Therefore, this research is very important to advance the development of the literature. The advancement of the literature will continue to keep up to date with the latest business issues, including performance, biodiversity, and other aspects of business.

Theoretical Review

Agency Theory

In the context of business, agency theory explains the relationship between the principal and the executor of the principal's interests (agent). This theory argues that there is the potential for agency problems, which include conflicts of interest and differences in access to information (asymmetry information). Jensen & Meckling (1976) explain agency relationships as:

"agency is an agreement in which one or more individuals (principals) instruct another person (agent) to perform services on their behalf, including delegating some decision-making authority to the agent."

Complex agency relationships occur when companies must fulfill various demands made by stakeholders. In practice, company managers often have greater control over resource allocation and information than stakeholders. Mäntysaari (2010) also notes that agency theory is based on the assumption that managers tend to act in accordance with their own self-interest, which can sometimes ignore the interests of stakeholders (Scott, 2015).

Upper Echelons Theory

The upper echelons theory developed by Hambrick (2007) is based on the assumption that in order to understand why an organization acts in a certain way, researchers must examine the characteristics of the top management in that organization. Overall, this theory proposes that "organizational outcomes and values, as well as the basis of understanding of key actors in the organization," are determined by the characteristics of top management. Such characteristics include age, tenure, functional background, education, socioeconomic roots, financial position, and group characteristics. The personal values and cognitive understanding of top management personnel who function as decision-makers have a great impact on analyzing and interpreting complex situations. This will impact the strategic choices made by top leaders and the results achieved by the organization David et al., (2012).

Biodiversity

Indonesia is an archipelago in Southeast Asia with thousands of islands totaling 17,508. Its total area is 1,904,569 km². (Dickson, 2023). Indonesia is known as one of the countries with rich biodiversity, including diverse flora and fauna. According to the 2014 Convention on Biological Biodiversity (CBD), Indonesia is considered one of the 17 countries referred to as megadiverse countries in the context of international conservation. The abundance of biodiversity in Indonesia does not rule out the risk of flora and fauna extinction. According to data from the CBD, a number of species in Indonesia are at risk of extinction, including 140 bird species, 63 mammal species, and 21 reptile species (CBD, 2014). Based on Law Number 5 of 1990, the care and preservation of biodiversity are strongly emphasized through conservation and recovery programs. In situ conservation efforts (biodiversity conservation and maintenance and recovery of species populations in their natural habitat) and ex situ conservation sites (conservation and preservation of biodiversity components outside their natural habitat) have been implemented in Indonesia as part of protected area management. (BAPPENAS, 2016).

There are cases where companies' activities can threaten biodiversity in Indonesia, which calls for greater attention. The government is trying to address this by implementing policies for companies to prevent biodiversity extinction. According to Law Number 8 of 1997, a company refers to an entity that continuously carries out activities for profit, either as an individual business or in the form of a legal entity or non-legal entity. In running the company, some responsibilities must be fulfilled, including social responsibility disclosure (D. A. P. S. Dewi et al., 2015). Biodiversity disclosure is an integral part of the corporate social responsibility framework. Corporate social responsibility is the way companies communicate about various aspects of their activities that relate to employees, society, and the environment (Pham & Tran, 2020).

CEO Characteristics

The corporate governance system in Indonesia follows a two-tier board approach with a board of directors and a board of commissioners (Ditta & Setiawan, 2019). The board of directors has the authority to run the company's operations to achieve various company goals. From the perspective of agency theory, the board of directors acts as an agent, while the board of commissioners represents the principal. The leader of the board of directors, called the CEO or president director, holds a key role as an agent responsible for carrying out the interests of the principal. The selection of the CEO is therefore an important step to mitigate agency conflicts. It is important to ensure that the selected CEO has the appropriate qualifications to achieve the company's objectives. Practically speaking, the CEO's leadership characteristics have a significant role in achieving the company's objectives.

A leader essentially has the ability to influence followers' attitudes and behaviors in driving performance achievement, including in the context of biodiversity disclosure. Several aspects of the leadership characteristics of company CEOs have been the focus of previous research. Some results from these studies show that leadership characteristics have a significant impact on the activities and achievements of companies in various aspects, including biodiversity disclosure. These CEO characteristic factors include age, education level, environmental knowledge and international experience.

Hypothesis Development

The Effect of CEO Age on Biodiversity Disclosure

According to Hambrick & Mason (1984), CEOs who have reached an advanced age tend to exhibit conservative traits. There are several reasons that can explain this conservative nature. First, older CEOs may face physical and mental limitations that are not as strong as younger CEOs. This may hamper their ability to come up with innovative ideas and learn new things, making strategic changes more difficult to implement. On the other hand, older CEOs tend to be more experienced and understand the importance of gathering sufficient information before making decisions, which results in more accurate evaluations. Second, older lead CEOs may have a strong psychological attachment to the way the organization currently operates, which may make them more reluctant to make significant changes. Third, older CEOs have often reached a stage in their careers where financial security and career stability become more meaningful. As a result, they may be more inclined to make less risky decisions and be more oriented towards maintaining the status quo rather than taking big risks (Darmadi, 2011).

In addition, Lewis et al., (2014) and Shen (2003) state that younger CEOs tend to have high motivation and innovation to develop the company, one of them by understanding the desires of the company's surrounding environment. The influence of the CEO on biodiversity disclosure may vary depending on whether the CEO has strong experience or knowledge of biodiversity. This is because older CEOs generally have more experience than younger CEOs. Older CEOs are usually very dedicated to the company and will do everything they can to improve its progress (Lin et al., 2014). Based on the theoretical description above, the first hypothesis of this study can be formulated as follows:

H1: Age of CEO affects biodiversity disclosure

The Effect of CEO Education Level on Biodiversity Disclosure

The education level of top executives influences the policy and strategy-making process. Directors who have a higher level of education tend to be more concerned about environmental issues. This is due to a deeper understanding of the benefits of policies that benefit both stakeholders and the environment. Educational background can be divided into two categories that are considered relevant in the context of environmental disclosure: a Master of Business Administration (MBA) degree and a law degree. In addition, the educational background of a CEO, which could include an MBA or law degree, may reflect a range of knowledge and understanding that influences corporate policies related to environmental issues (Triyani & Setyahuni, 2020; Huang, 2013).

Research conducted by Triyani & Setyahuni (2020) examined the impact of the characteristics of the CEO on the disclosure of environmental, social, and corporate governance issues. This study involved 159 companies listed on the Indonesia Stock Exchange (IDX) as samples. The results showed that an MBA educational background contributed positively to the disclosure of environmental, social, and corporate governance issues. In addition, Faisal et al., (2019) showed that educational background affects the increase in corporate social responsibility disclosure. Lewis et al. (2014) also found evidence that having an MBA degree tends to be associated with the use of more effective strategies to increase company value and understand stakeholder needs in disclosing the company's environmental performance. Based on the theoretical description above, the second hypothesis of this study can be formulated as follows:

H2: The education level of the CEO affects biodiversity disclosure

The Effect of CEO's Environmental Knowledge on Biodiversity Disclosure

Environmental knowledge is an aspect that is strongly linked to the characteristics of a CEO who is concerned with decision-making ability. This reflects the ability of a CEO to make decisions related to environmental issues, in line with the upper echelons theory. CEOs with economics degrees are more likely to pursue environmentally responsible practices than managers with social or humanities degrees (Mikko H. Manner, 2010). According to Rivera & De Leon (2005) education in the social sciences and humanities can encourage directors to take positive initiatives in dealing with social issues and complying with environmental standards. Policies implemented by directors that encourage initiative can lead to conflicts between groups within the company, in accordance with agency theory. This conflict occurs when principals and agents have different views about the future of the company. Meanwhile, according to Sumarta et al., (2021) the results of environmental knowledge research, which is represented by education in the economic, social, or environmental fields of the CEO, show an insignificant impact on corporate environmental disclosure. A CEO who has a deeper understanding of environmental issues will positively increase their awareness and understanding of the importance of disclosing environmental information (Amore et al., 2019). Based on the theoretical description above, the third hypothesis of this study can be formulated as follows:

H3: CEO environmental knowledge affects biodiversity disclosure.

The Effect of CEO International Experience on Biodiversity Disclosure

CEOs with international experience often bring valuable and unique perspectives that directors without international experience lack. This has great significance, especially in the context of future corporate sustainability, especially in terms of corporate social engagement (Shahab et al., 2020). However, it is important to keep in mind that international ideas and experiences can also lead to conflicts within the company. In addition, policies resulting from international experiences can also trigger conflicts between agents and principals. As stated by Gong (2006), establishing legitimacy among corporate stakeholders through international experience is crucial for garnering corporate value in their perception. Legitimacy among corporate stakeholders can be attained by engaging in social and environmental practices and effective communication (Du & Vieira, 2012). Furthermore, Suutari & Makela (2007). suggest that international experience contributes to the expansion of a company's global network.

Research conducted by Sumarta et al., (2021) shows that the international experience of the CEO affects environmental disclosure. CEOs who have a level of international experience have different skills than directors without international experience. First, international experience introduces them to different values, languages, and social structures. When facing emerging challenges and problems, directors with international experience tend to be more open to seeking new solutions rather than relying solely on existing ones. Secondly, international experience also increases their knowledge of markets, connections, and differences in demand, which can be very useful in an international business context. The benefits obtained by the company from policies implemented by leaders are the result of the principle of upper echelons theory.

Based on the theoretical description above, the fourth hypothesis of this study can be formulated as follows:

H4: The CEO's international experience affects biodiversity disclosure

Research Framework

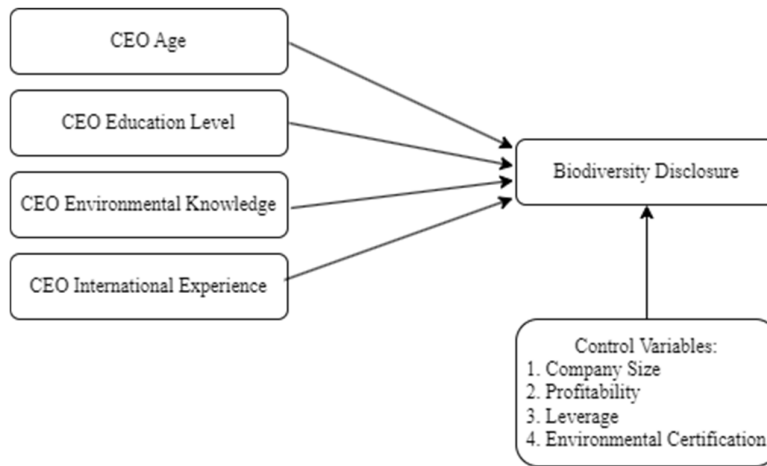


Figure 1. Research Framework

Methods

Research Design

The method used to analyze the problems in this study is to use quantitative methods. The research uses secondary data, which are annual reports and sustainability reports on non-financial companies listed on the Indonesia Stock Exchange (IDX). The sources of secondary data that will be used in this study are data that has been published on the website www.idx.co.id and the official website of each company. The data taken in the research occurred within a period of three years, from 2020 to 2022. The sampling method uses purposive sampling, where companies are selected based on certain criteria that are in line with the research objectives.

Variable Measurement

In this study, the dependent variable analyzed is the company's biodiversity disclosure. To measure the level of corporate biodiversity disclosure, this study uses a biodiversity disclosure index developed by (Adler et al., 2018). The biodiversity index used in the study consists of 28 items.

Each of the 28 index items should be rated from 0 to 3. A score of "0" is given when a particular index item is not mentioned at all. A score of "1" is given when disclosures related to a particular index item are minimal, vague, and/or very general. A score of "2" is given for a particular index item when the disclosure contains objective, verifiable data. A score of "3" is given when the specific index item is associated with disclosures that include all disclosure elements scored as "2," as well as providing specific information that identifies locations/facilities of operations, species affected, and/or amount of fauna and flora affected; description of specific actions taken and/or amount of money spent; discussion of trend information; and/or linkage of the data presented to company strategies, objectives, performance measures, targets, events, or accidents. The measurement of all variables can be seen in Table 1.

Table 1. Variable Measurement

Variable	Measurement
Dependent Variable	
Biodiversity Disclosure	$\frac{\text{total disclosed value}}{\text{total value}}$
Independent Variable	
Age	Number of CEOs' age in years

Education Level	0: The CEO has a bachelor's degree or below 1: CEO with a master's degree
Environmental Knowledge	0: Educational background of the CEO outside of economics, social and humanities education 1: Educational background of the CEO in economics, social and humanities education
International Experience	Number of management positions in overseas companies/entities held before the position of CEO of the company
Control Variables	
Company Size	$Ln(\text{Total Asset})$
Profitability	$ROA = \frac{\text{Net Profit}}{\text{Total Asset}}$
Leverage	$DER = \frac{\text{Total Liability}}{\text{Total Equity}}$
Environmental Certification	0: Company has no environmental certification 1: Company has environmental certification

This study used the statistic descriptive, classic assumption test and multiple regression analysis to look at the data. In this reaserch, this is the multiple linear regression equation that was used:

$$BDY = \alpha + \beta_1 AGE + \beta_2 EDU + \beta_3 EKL + \beta_4 INT + \beta_5 SZE + \beta_6 PRF + \beta_7 LVG + \beta_8 CRF + \varepsilon$$

Information:

Y : Biodiversity

α : Constanta

β : Regression Coefficient

AGE : CEO Age

EDU : CEO Education Level

EKL : CEO Environmental Knowledge

INT : CEO International Experience

SZE : Size Company

PRF : Profitability

LVG : Leverage

CRF : Environmental Certification

ε : Error

Result

Statistic Descriptive

Based on Table 2 below, it can be seen that there are 493 samples that fulfill the criteria as research samples. The table below shows that biodiversity disclosure in companies listed on the IDX has an average of 0.19424, with the lowest value of 0.000 and the highest value of 0.964. This indicates that there are still companies that have not disclosed their biodiversity optimally. Age of CEO (AGE) has the lowest value of 26 and the highest value of 85, with an average of 55.91. This indicates that the age of the company's CEO is dominated by the age of 50 and older. The CEO's Education Level (EDU) uses a dummy measurement so that the lowest value is 0 and the highest value is 1 with an average of 0.41. As well as Environmental Knowledge (EKL) using dummy measurements so that the lowest value is 0 and the highest value is 1 with an average of 0.65. International Experience (INT) has a low score of 0 and a high score of 17, with an average of 0.57. This indicates that many CEOs do not have international experience. Furthermore, Company Size (SZE) has the lowest value of 24.683 and the highest value of 33.655, with an average value of 29.48039. Profitability (PRF) has the lowest value of -0.876 and the highest value of 0.599, with an average value of 0.04776. Leverage (LVG) has the lowest value of -90,333 and the highest value of 20,800, with an average value of 1.01227. Last, Environmental Certification (CRF) uses a dummy measurement so that the lowest value is 0 and the highest value is 1 with an average of 0.66.

Table 2. Statistic Descriptive

Variable	N	Min.	Max.	Mean	Std. Dev.
Biodiversity Disclosure	493	0.000	0.964	0.19424	0.2157
Age	493	26	85	55.91	8.955
Education Level	493	0	1	0.41	0.493
Environmental Knowledge	493	0	1	0.65	0.477
International Experience	493	0	17	0.57	1.673
Size Company	493	24.683	33.655	29.48039	1.665511
Profitability	493	-0.876	0.599	0.04776	0.118122
Leverage	493	-90.333	29.317	1.01227	5.176083
Environmental Certification	493	0	1	0.66	0.475
Valid N (listwise)	493				

Assumption Clasic Test

The results of classical assumption testing are presented in table 3 below. Based on the results of the normality test using the CLT method, it shows that the variables used in this study are normally distributed because the sample size is more than 30. Furthermore, based on the multicollinearity test results in the table above, all tolerance and VIF values for each variable show that tolerance > 0.10 and VIF < 10, which means that there is no multicollinearity in this study. Based on the results of the heteroscedasticity test using the Spearman method, it is shown that the significance of the variable age of the lead director is 0.750, education level of the lead director is 0.905, environmental knowledge of the lead director is 0.663, international experience is 0.963, company size is 0.318, profitability is 0.187, leverage is 0.469 and environmental certification is 0.354. From these values, it can be concluded that all significance values for each variable are greater than 0.05, which means the data analysis in this study does not show heteroscedasticity. Furthermore, in this study, an autocorrelation test was conducted with the same criteria used by Santoso (2012) which is considered to pass this test if the Durbin Watson value is > -2 and < 2.

Table 3. Statistic Descriptive

Variable	Tolerance	VIF	Sig. (Spearmen Rho)
Age	0.946	1.057	0.750
Education Level	0.868	1.151	0.905
Environmental Knowledge	0.834	1.199	0.663
International Experience	0.975	1.026	0.963
Company Size	0.879	1.137	0.318
Profitability	0.986	1.014	0.187
Leverage	0.973	1.028	0.469
Environmental Certification	0.909	1.100	0,354
Asym. Sig. (2-tailed)	0.000		
Durbin Watson	1.323		

Hypothesis Test Results

Based on the results of data processing using SPSS, the results of hypothesis testing are presented in table 4 below. The analysis results show that the F Test is considered significant ($F < 0.05$), which explains that the model is suitable or accepted. The results in the table below then produce the following regression model:

$$BDY = -1.222 - 0.002AGE + 0.001EDU + 0.011EKL - 0.007INT + 0.050SZE + 0.153PRF + 0.000LVG + 0.078CRF + \epsilon$$

Table 4. Hypothesis Test Result

Variable	β	Sig.	Conclusion
(constant)	-1.222	0.000	-
Age	-0.002	0.043	H1 Accepted
Education Level	0.001	0.950	H2 Rejected
Environmental Knowledge	0.011	0.582	H3 Rejected
International Experience	-0.007	0.205	H4 Rejected
Company Size	0.050	0.000	
Profitability	0.153	0.034	
Leverage	0.000	0.843	
Environmental Certification	0.078	0.000	
Adj. R Square	0.223		
F Test	0.000		

Discussion

Derived from the outcomes of the hypothesis testing conducted, the results show that the variable age of the CEO is found to have a significant influence on biodiversity disclosure. This finding is in line with that reported by (Zhang et al., 2018) who found that older CEOs tend to be more ethical by prioritizing the public interest over their personal interests. Older directors also tend to be more concerned with trust, reputation, and focus on the company's progress. CEOs with an older age have more work experience and it is proven that CEOs with work experience will have an impact on decision-making in biodiversity disclosure.

The variable of CEO education level was found to have no significant effect on biodiversity disclosure. This study is not in line with the results of research by Issa et al. (2022) which states that the higher the level of CEO education, the higher the level of biodiversity disclosure in a company. In addition, a higher level of education also helps the CEO to be more confident and courageous in facing risks and uncertainties that may be faced by the company (Cho et al., 2019). The findings of this study may be due to the personality characteristics of CEOs who have a low level of concern for the environment.

The CEO's environmental knowledge variable interpreted from the economic/social/environmental education background shows no significant influence on biodiversity disclosure. According to Khan et al. (2019) the CEO's educational background has no significant influence in determining the company's social and environmental responsibility disclosure practices. Education in economics/social/environmental fields may not provide additional motivation for the CEO to actively contribute to environmental issues. In fact, there is a tendency that business education may still prioritize seeking maximum profit without considering social responsibility (Alajoutsjarvi et al., 2015).

The variable of CEO international experience was found to have no significant influence on biodiversity disclosure. This finding is not in line with Shahab et al. (2020) and Azam et al. (2018) who found that CEOs with higher levels of international experience can influence company achievements and benefit companies in strategic decision-making. This finding can be caused by the lower level of public pressure, so CEOs with high international experience are less likely to prioritize environmental disclosure. In addition, CEOs with high international experience may have limitations in applying their environmental knowledge, so they cannot fully realize the environmental disclosure expectations desired by the CEO.

Regarding the control variables, the result analysis shows that company size has a positive effect on biodiversity disclosure. This result is consistent with the study conducted by R. U. Dewi & Muslih (2018) which shows that the larger the size of the company, the higher the level of disclosure that occurs. This study also shows that leverage has a no effect on biodiversity disclosure. This is not in line with research conducted by Oktariyani & Meutia (2016) which states that the higher the level of leverage, the higher the level of disclosure made by the company. In the profitability variable, the level of biodiversity disclosure is influenced by this factor. This is not in line with a study conducted by Sutadipraja et al. (2020) which proves that the amount of company profit does not affect the level of disclosure. Last, in the environmental certification variable, there is a positive influence on biodiversity disclosure. This result is consistent with research conducted by (Kiswanto et al., 2020) which states that the ownership of environmental certification by the company will affect the high level of biodiversity disclosure.

Conclusion

This study aims to determine the effect of CEO characteristics interpreted by age, education level, environmental knowledge and international experience on biodiversity disclosure in non-financial companies in Indonesia. Based on the results of the analysis, it can be concluded that the age of the CEO affects biodiversity disclosure, with a significance value of 0.043. However, the level of education of the CEO has no effect on biodiversity with a significance value of 0.950, the environmental knowledge of the CEO has no effect on biodiversity with a significance value of 0.582, and the international experience of the CEO has no effect on biodiversity with a significance value of 0.205.

The limitations in this study are that information and data from non-financial companies listed on the Indonesia Stock Exchange (IDX) are not fully available because some companies have not provided annual reports and sustainability reports. The variables studied in the characteristics of the managing director are still limited and do not cover all the characteristics that the CEO may have. The variables in this study are still not optimal in describing the factors that influence biodiversity disclosure by showing a relatively small R Square value, which is 0.223.

Suggestions for future research to be better are to use a longer research period to provide more comprehensive results. In addition, future research can consider adding independent variables related to CEO characteristics, such as gender, religion, nationality, tenure, and CEO political relations, so that the research results can be more representative of CEO characteristics. This study found that the CEO's role is significant in biodiversity disclosure activities within the company. CEO decisions play an important role in adopting better biodiversity disclosure practices. Therefore, companies may consider appointing more mature CEOs to support increased biodiversity disclosure. The hope for this study is that it can expand knowledge regarding the influence of CEOs on biodiversity disclosure. And this research can be an additional piece of literature related to biodiversity and environmental performance.

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