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Dear Faisal Faisal,

herewith it is certified that the paper titled "*Industry classifications and environmental, social, and governance disclosure: The moderating role of CEO power*" co-authored by Cornelio Purwantini, Faisal Faisal, Corina Joseph, Indira Januarti has been blind reviewed and accepted for publishing in the issue of the *Journal of Governance and Regulation* (ISSN – 2220-9352 (printed version), ISSN – 2306-6784 (online version)) in 2023.

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Oleksandr Kostyuk



INDUSTRY CLASSIFICATIONS AND ENVIRONMENTAL, SOCIAL, AND GOVERNANCE DISCLOSURE: THE MODERATING ROLE OF CEO POWER

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Abstract

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This study aims to investigate the moderating effect of chief executive officer (CEO) power on the relationship between industry classifications and environmental, social, and governance (ESG) disclosure using the legitimacy theory. Forty-eight public companies listed on the Indonesia Stock Exchange during the period 2012–2016 were analyzed via partial least squares. The results show that industry classifications have a significant effect on ESG disclosure. Specifically, companies in sensitive industries and companies for which the majority of the shares are owned by the government are likely to disclose more ESG information. Furthermore, our study also provides empirical evidence that CEO power plays a significant role in strengthening the relationship between industry classification and ESG disclosure. Surprisingly, CEOs of companies whose majority shares are owned by the government fail to demonstrate their role in encouraging higher disclosure of ESG. The managerial implication of this finding suggested that CEO power may be an effective mechanism in increasing companies' commitments to disclose ESG activities. This study has practical implications by providing new insights into the role of CEO characteristics in the relationship between industry types and ESG disclosure for Indonesian companies.

Keywords: Palestinian Campaign Finance, Accountability, Election, Political Corruption

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1. INTRODUCTION

In recent years, issues related to the motives and benefits of the disclosure of non-financial information such as environmental, social, and corporate governance (ESG) information have become an interesting topic for both academics and practitioners (Fatemi et al., 2018; Miralles-Quiros et al., 2017). Several previous studies have reported survey results related to the benefits of ESG information. A survey conducted by van Duuren et al. (2016) shows that over 50% of asset managers in the US and Europe use ESG data as red flags for evaluating a given company's stocks. Similarly, Amel-Zadeh and Serafeim (2018) and Al Hawaj and Buallay (2022) concluded that a company's ESG information is used to evaluate investment performance and product strategy decisions. While these surveys document the perceived benefits of having ESG information, many companies remain reluctant to disclose ESG information to the public (Gunawan, 2015; Hanifa & Cahaya, 2016). Previous studies have concluded that there are several reasons for companies to conduct disclosure activities, such as increase transparency and accountability, improved reputation and legitimacy, improved business practice and performance, increase brand and customer loyalty, and reduce costs (Faisal et al., 2019; Hrasky, 2011; Kuo & Yi-Ju Chen, 2013; Rahman & Alsayegh, 2021). Other reasons such as massive industrialization, dwindling resources, damaged ecosystems and exploited labor are also determining factors for companies to disclose ESG factors (Khan et al., 2021). The motives of legitimacy and accountability are created due to institutional pressures (Cormier et al., 2005; Ali et al., 2017). Pressure from a variety of stakeholders has prompted companies to integrate ESG practices into their operations. It is not surprising that various industrial sectors have adapted their activities and operations in line with the perspective of sustainability (Li et al., 2020), including reporting ESG-related activities. Environmental activities (E) involve a company's efforts to positively impact the environment by complying with existing regulations and recognizing future impacts. Social activities (S) are the equitable treatment of relevant stakeholders and the protection of the social ecosystem in which the company operates. Governance (G) integrates corporate ethics and integrity, including principles like transparency and fair dealing, and the effective functioning of the board of directors (Limkriangkrai et al., 2017).

Indonesia presents an interesting case in which to explore the determinants of ESG disclosures. For some time, Indonesian companies have been confronted with a number of factors that expose them to ESG practices (Faisal et al., 2018). These are issues such as pollution, deforestation, social and political insecurity, and corruption (Djajadikerta & Trireksani, 2012). Despite these issues, since 2017, the Government of Indonesia has continuously committed to implementing ESG rules in investment and business practices such as the Government Regulation No. 47/2012 related to the obligation of companies to implement corporate social responsibility; the Financial Services Authority

(Financial Services Authority) rule No. 60/POJK.04/2017 regarding the implementation of sustainability finance for financial services institutions.

This paper aims to test the relationship between types of industry and ESG disclosure. The industry sector plays a significant role in influencing ESG disclosure activities (Velte, 2017). However, the findings of prior studies are varied. For example, several findings suggest that the sensitivity of industry has a positive effect on ESG disclosure (Garcia et al., 2017; Kuo & Yi-Ju Chen, 2013). Other research has found that the manufacturing sector discloses less environmental information (Cowen et al., 1987). Baldini et al. (2018) argue that the analysis of factors affecting ESG disclosure practices should be limited in relation to certain types of industries. This variegation of findings means that the study on the effects of the industry sector on ESG disclosure is still relevant (Gillan et al., 2021). In addition, various studies have been conducted related to ESG information disclosure practices, mainly in developed countries in continental Europe (Buallay, 2019; Camilleri, 2015; Velte, 2016) and the US (Manita et al., 2018; Weston & Nnadi, 2021). Several studies have been conducted in developing countries in Latin America (Husted & de Sousa-Filho, 2017; Lavin & Montecinos-Pearce, 2021), BRICS countries (Brazil, Russia, India, China, South Africa) (Garcia et al., 2017), Egypt (Aboud & Diab, 2018; Al Farooque et al., 2022), Tunisia (Khemir et al., 2019), and Malaysia (Atan et al., 2018). In Indonesia, however, research related to ESG disclosure practices remains very limited (Purwantini et al., 2019). Thus, the current study would enrich the ESG disclosure literature. It is because that institutional backgrounds, such as voluntary or mandatory, may also produce different results than previous studies (Khan et al., 2020; Mooneapen et al., 2022; Singhania & Saini, 2023).

Previous studies show that the level of ESG disclosure in Indonesia remains low (Hanifa & Cahaya, 2016) to moderate (Faisal et al., 2018; Trireksani & Djajadikerta, 2016). One reason for this is the low awareness of managers of companies in Indonesia about ESG issues (Gunawan, 2015). The awareness and involvement of chief executive officers (CEOs) are important. To release quality ESG information, companies require a competent CEO who has the knowledge, experience, skills, and professionalism to balance strategic and business decisions with the ESG issues facing a company (Lewis et al., 2014; Li et al., 2018). CEOs with greater power can enhance the value of a business by providing ESG information to key corporate stakeholders, such as investors (Li et al., 2018; Wukich, 2020). Results from previous research still show inconsistency related to the CEO's role in enhancing ESG disclosure. van Duuren et al. (2016) argue that the CEO plays an important role in the investment process and risk control. It is expected that CEO power may be an important factor that can moderate the relationship between industry type and ESG disclosure, thus providing a motivation for this study. This is based on the conclusion of a previous study that a company's improved performance is not only due to ESG

disclosure practices but can also be due to the influence of the greater power or authority of the CEO (Li et al., 2018). The results of this study may provide new insights into the role of CEO characteristics in the relationship between industry types and ESG disclosure for Indonesian companies.

Based on the explanations above, this study tests whether industry types and CEO power directly affect ESG disclosure and whether CEO power moderates the relationship between industry type and ESG disclosure using the legitimacy theory. Legitimacy theory has been used to explain the influence of company characteristics on ESG disclosure (Baldini et al., 2018; Branco & Rodrigues, 2008; Claasen & Roloff, 2012; Milne & Patten, 2002). ESG disclosure can be explained by the legitimacy theory as it becomes a strategy to protect the legitimacy of a company. ESG disclosure can overcome pressure from stakeholders who need such information (Baldini et al., 2018; Lokuwaduge & Heenetigala, 2017) and can also be used as an important tool for improving performance (Clarkson et al., 2008; Weber, 2013). However, practically, only a small part of the ESG issue can be described “materially” in order to create “relevant value” for each industry (Kotsantonis et al., 2016). Therefore, companies need to be encouraged to disclose ESG more fully and transparently (McBrayer, 2018). Gunawan (2015) shows that the main motivation for corporate social responsibility disclosure in Indonesia is to create a positive image. Furthermore, her results indicate that companies still do not trust the benefits of disclosing social responsibility and are instead reluctant to provide information because it increases costs.

This study addresses the call of these studies by examining the effect of CEO power and industry type on the disclosure of ESG from the lens of legitimacy theory. This research contributes to the literature in the following ways. First, it enriches insights into the field of ESG disclosures in developing countries. Second, this study may provide additional evidence regarding the role of CEO power in enhancing ESG disclosure.

The paper is structured as follows. Section 2 presents the literature review. Section 3 explains the research methods. Section 4 presents the results. Section 5 discusses the study’s results. Finally, Section 6 highlights the conclusion of this research.

2. LITERATURE REVIEW

Legitimacy theory may explain practices and strategies for the disclosure of ESG factors (Garcia et al., 2017). Deegan and Gordon (1996) state that low investment in ESG factors has resulted in consistently low social and environmental disclosure. On the other hand, disclosure of ESG factors may be an effort on the part of firms to create a good reputation (Hasseldine et al., 2005; Kuzey & Uyar, 2017). Managers play a significant role in the legitimization of corporations by managing the content of the information disclosed (Deegan & Gordon, 1996; Richardson & Welker, 2001). A number of studies on ESG factors have been conducted. This includes research on factors that determine the level of ESG disclosure — for example,

studies on the determinants of ESG (Baldini et al., 2018; Rahman & Alsayegh, 2021), internal factors (Adams, 2002; Faisal & Achmad, 2014; Li et al., 2018) and the impact of ESG disclosure on financial performance (Garcia et al., 2017) and firm values (Clarkson et al., 2013; Li et al., 2018) — and research into why and how investors use ESG (Amel-Zadeh & Serafeim, 2018).

Industry variations have an effect on ESG disclosure levels (Gamerschlag et al., 2011; Kumar et al., 2021). Companies classified as being part of sensitive industries have better ESG indicators across all three dimensions of ESG. Companies classified as being part of sensitive industries achieve superior environmental performance compared to companies classified as being part of non-sensitive industries (Garcia et al., 2017). Richardson and Welker (2001) and Deegan and Gordon (1996) found that companies classified as being in sensitive industries express more consistent socio-environmental practices as a way of legitimizing their operations as the sector has a significant socio-environmental impact. The more sensitive the industry a company is in, the more company will increase ESG disclosure in order to explain its social responsibility. However, Matakanye et al. (2021) and Campopiano and De Massis (2015) argue that there is no difference in the level of ESG disclosure between manufacturing and non-manufacturing family firms. In addition, non-family manufacturing firms are more active compared to non-manufacturing companies in terms of ESG disclosure. The higher disclosure level of non-family manufacturing firms may be caused by the impact of the manufacturing production process and the waste it produces on the surrounding environment.

According to the Bloomberg database, a company is classified into one of nine industrial sectors. Previous studies show that the disclosure of each sector may be varied. The manufacturing sector discloses the most, while the service/retail/food industry sector discloses the least. Gamerschlag et al. (2011) found that companies that produce consumer goods and energy providers engage in more social disclosure than other industrial sectors. Meanwhile, service sector companies such as insurance firms, software companies, and the technology industry tend to reveal less ESG information. The issue of pressure on ESG disclosure arises in companies that have a variety of holdings that are owned partly by companies and partly by the government as compared to companies without government ownership. The government has a control function in a company that encourages companies to conduct ESG disclosure more often and to be better over time (Baldini et al., 2018; Kotsantonis et al., 2016; Weber, 2013). According to legitimacy theory, companies in the consumer goods, energy, and mining sectors expose their public positions and strive to reduce political costs and external pressures through ESG disclosure. Increased disclosure is intended to legitimize companies’ existence (Carels et al., 2013; Kumar et al., 2021). In sum, each type of industry has its own characteristics, resulting in different impacts from its operating activities (Faisal et al., 2022).

Based on the explanation above, the greater the environmental and community impact, the greater the disclosure.

H1a: Industry type based on sensitivity level affects ESG disclosure.

H1b: Industry type based on business type affects ESG disclosure.

H1c: Industry type based on sector affects ESG disclosure.

H1d: Industry type based on the existence of government ownership affects ESG disclosure.

One of the internal factors that affects disclosure is support from top management. Adams (2002) argues that CEOs as decision-makers play a significant role in driving ESG activities and disclosures. The power CEO is defined as the CEO's ability to overcome resistance and consistently influence key corporate decisions (Haleblian & Finkelstein, 1993). A powerful CEO has much control and influence over other managers and directors of the company's overall business management (Baldenius et al., 2014). The powerful CEOs have stronger motivation to govern ESG disclosure practices to demonstrate their commitment to stakeholders' concerns (van Duuren et al., 2016; Li et al., 2018). Lewis et al. (2014) suggest that CEO characteristics play an important role in mitigating external stakeholder pressures. For example, CEOs who have increased power and capacity will make better decisions to maintain organizational continuity (Pucheta-Martínez & Gallego-Álvarez, 2021). Furthermore, more experienced CEOs tend to have a better ability to understand a company's conditions, allowing them to reduce institutional pressures on stakeholders by disclosing ESG information (Lewis et al., 2014). Based on the prior studies, the higher the CEO power the higher pressure to disclose ESG information.

H2: CEO power affects ESG disclosure.

Companies classified as being in sensitive industries have better levels of ESG disclosure than non-sensitive companies (Garcia et al., 2017). Campopiano and De Massis (2015) found that the disclosure of manufacturing companies is higher than non-manufacturing companies. Carels et al. (2013) argue that mining companies outperform in communicating environmental issues compared to other sectors. The existence of government shares as a controller in the company shows a positive and significant influence on the level of disclosure of ESG information (Baldini et al., 2018; Kotsantonis et al., 2016; Weber, 2013). Higher levels of disclosure aim to create a good reputation (Hasseldine et al., 2005). The CEO plays an important role in disclosing such ESG information to manage the impressions of stakeholders by directing the content of the information conveyed (Carels et al., 2013).

H3a: CEOs' power moderates the relationship between industry type based on sensitivity and ESG disclosure.

H3b: CEOs' power moderates the relationship between industry type based on business type and ESG disclosure.

H3c: CEOs' power moderates the relationship between industry type based on sector and ESG disclosure.

H3d: CEOs' power moderates the relationship between industry type based on the existence of government ownership and ESG disclosure.

3. RESEARCH METHODOLOGY

The research population is all 540 companies listed on the Indonesia Stock Exchange as of December 31, 2016. Of these 540 companies, 492 did not have complete data on ESG scores. Thus, the number of samples is 48 companies. Given that this study was carried out during the period 2012–2016, the total sample is 240. These 240 companies are categorized based on industry sector. Table 1 presents the measurement of variables. The dependent variable is ESG scores. The ESG scores are sourced from Bloomberg databases (Baldini et al., 2018; Fatemi et al., 2018; McBrayer, 2018). The ESG scores from the Bloomberg database are adjusted according to different industry sectors. This allows variations between industries for each industry to be minimized (Baldini et al., 2018). The independent variable is *industry type*. The variable of industry type (*J11*) is measured with the dummy variables, taking a value of one if the firm is categorised as sensitive and zero otherwise. The variable of industry type (*J12*) is measured with the dummy variables, taking a value of one if the firm is categorised as non-manufacturing and zero otherwise. The variable of industry type (*J14*) is measured with the dummy variables, taking a value of one if the firm is categorised as government ownership and zero otherwise. In the study, *CEO power* is acting as the moderating variable. CEO power is measured by the tenure of a CEO (McBrayer, 2018). This study uses three control variables, namely, *profitability*, *leverage* and *size*. These control variables are measured by referring to previous studies (see Table 1). In this study, hypotheses testing uses the partial least squares (PLS) approach. PLS is a suitable method to test moderating effects when a feature is available to complement an indirect effect with various options. It also enables researchers to simultaneously test the relations between variables (Soloivida & Latan, 2017). In contrast to other multivariate techniques, PLS is not dependent on the hypothesis of normality. However, assumptions such as multicollinearity and the quality of the fit indices need to be taken into account in the evaluation of the local model (Latan et al., 2018). The statistical model is presented as follows:

$$ESG = \beta_0 + \beta_1 J11 + \beta_2 J12 + \beta_3 J13 + \beta_4 J14 + \beta_5 CEO + \beta_6 J1 * CEO + \beta_7 J12 * CEO + \beta_8 J13 * CEO + \beta_9 J14 * CEO + \beta_{10} Pr + \beta_{11} Le + \beta_{12} Sz + \varepsilon \quad (1)$$

Table 1. Variable measurement

Variable	Measurement	Source
ESG	Bloomberg ESG score	Baldini et al. (2018)
CEO power	Tenure of CEO	McBrayer (2018)
Industry type (JI1)	0 = non-sensitive 1 = sensitive	Faisal et al. (2018)
Industry type (JI2)	0 = manufacturing 1 = non-manufacturing	Weber (2013)
Industry type (JI3)	1 = agriculture (plantation) 2 = basic industry and chemicals 3 = customer goods 4 = infrastructure utility and transportation 5 = mining 6 = miscellaneous 7 = finance 8 = property real estate and building construction 9 = trade services and investment	Weber (2013)
Industry type (JI4)	0 = non-government ownership 1 = government ownership	Weber (2013)
Profitability	ROA = Net income divided by total assets	Faisal et al. (2018)
Leverage	Total liability divided by total assets	Faisal et al. (2018)
Firm size	LnTotal assets	Faisal et al. (2018)

4. RESULTS

Although Table 2 presents the descriptive statistics of the variables. For five consecutive years (2012–2016), the number of companies that disclosed environmental information was 13 (65 observations); social information was 17 (85 observations); governance information was 42 (210 observations); ESG information was 48 (240 observations). In terms of the level of disclosure per year, this study found that the mean (median) disclosure of ESG information was as follows: 16.07 (10.19); 17.22 (11.16); 18.08 (11.16); 19.15 (11.16); 20.36 (11.32). In general, the mean of ESG disclosure indicates a positive trend from year to year. The results also indicate that the contents of ESG disclosure are varied, with governance being the most-disclosed item, followed by social issues and environmental-related information as the least disclosed by companies in Indonesia. The variation in the disclosure may indicate a lack of uniformity in ESG reporting standards (Lokuwaduge & Heenetigala, 2017). The mean (median) of CEO tenure showed that the median tenure of CEOs is 5.06 (4.00) years. These results indicate that a CEO's tenure is relatively short. For control variables, the descriptive statistics show that on average, a sample company has a relatively low level of *profitability*, high *leverage*, and relatively small *size*.

Table 2. Descriptive statistics

Variable	Year	n	Mean	Median	Std. deviation	Minimum	Maximum
ESG (%)	2012	48	16.07	10.19	11.61	5.79	48.76
	2013	48	17.22	11.16	11.77	6.61	52.89
	2014	48	18.08	11.16	12.28	6.61	51.65
	2015	48	19.15	11.16	13.10	6.61	54.13
	2016	48	20.36	11.32	13.32	6.61	51.65
	Total	240	18.18	11.16	12.42	5.79	54.13
Environmental (%)	2012	13	19.39	14.73	14.32	2.33	46.51
	2013	13	18.41	12.40	14.46	2.33	51.94
	2014	13	18.89	14.73	14.73	2.33	55.81
	2015	13	21.75	14.73	14.71	6.98	55.81
	2016	13	20.91	14.73	14.28	6.20	54.26
	Total	65	19.87	14.73	14.10	2.33	55.81
Social (%)	2012	17	28.67	22.81	14.73	7.02	49.12
	2013	17	29.62	22.81	14.12	7.02	52.63
	2014	17	31.68	22.07	15.06	7.02	52.63
	2015	17	32.44	32.23	12.95	7.02	54.39
	2016	17	32.51	33.33	13.48	7.02	54.39
	Total	85	30.98	28.07	13.84	7.02	54.39
Governance (%)	2012	42	40.66	42.86	13.01	8.68	75.00
	2013	42	42.50	42.86	12.83	9.92	69.64
	2014	42	42.96	42.86	12.69	9.92	67.86
	2015	42	42.63	42.86	12.68	9.92	67.86
	2016	42	43.22	42.86	12.53	9.92	67.86
	Total	210	42.39	42.86	12.66	8.68	75.00
CEO power (year)	2012	48	4.53	3.54	3.55	0.42	17.50
	2013	48	5.11	3.54	3.81	0.58	18.50
	2014	48	5.22	4.64	3.90	0.25	19.50
	2015	48	5.16	4.00	4.21	0.67	20.50
	2016	48	5.27	4.00	4.32	0.25	21.50
	Total	240	5.06	4.00	3.94	0.25	21.50
Profitability (%)	2012	48	11.39	8.12	11.97	-16.43	43.08
	2013	48	7.42	5.48	9.37	-23.53	43.36
	2014	48	6.44	4.22	8.55	-10.14	43.93
	2015	48	3.29	3.06	8.74	-22.73	39.00
	2016	48	4.55	3.31	7.73	-17.15	39.36
	Total	240	6.62	4.73	9.72	-23.53	43.93
Leverage (%)	2012	48	6.03	0.55	11.18	0.02	54.99
	2013	48	7.60	0.50	14.25	0.00	56.91
	2014	48	8.71	0.54	14.33	0.02	49.83
	2015	48	9.33	0.50	17.41	0.03	79.14
	2016	48	9.36	0.44	17.24	0.00	75.76
	Total	240	8.21	0.50	14.98	0.00	79.14
Firm size (Ln)	2012	48	4.11	4.16	0.77	1.64	5.80
	2013	48	4.17	4.17	0.75	1.56	5.87
	2014	48	4.23	4.22	0.77	1.53	5.93
	2015	48	4.27	4.24	0.76	1.58	5.96
	2016	48	4.29	4.30	0.77	1.64	6.02
	Total	240	4.22	4.22	0.76	1.53	6.02

Table 3 shows the correlations matrix between industry-type variables (*J11*, *J12*, *J13*, and *J14*), *CEO power* (*CEO*), *profitability*, *leverage*, *firm size*, ESG disclosure, and each dimension of ESG. Table 3 shows that all industry group variables have a positive and significant correlation at the significant level of 1%, except for industry types based on business sectors, which have negative

correlations with ESG disclosure. *CEO power* is negatively correlated and significant at the level of 1% with ESG, social, and environmental. For variable control, *leverage* and *firm size* have correlations with ESG disclosure at the significant levels of 1% and 5%. Overall, these results are in line with predictions that *industry types* and *CEO power* have a positive correlation with ESG.

Table 3. Correlation matrix

Variable	ESG	Governance	Social	Environmental
<i>J11</i>	0.375***	0.431***	0.399***	0.56***
<i>J12</i>	0.159**	0.318***	0.120	0.199
<i>J13</i>	-0.275***	-0.247***	0.176	-0.009
<i>J14</i>	0.414***	-0.217***	0.597***	0.193
<i>CEO power</i>	-0.202***	-0.014	-0.244**	-0.322***
<i>Profitability</i>	0.109*	0.095	0.174	-0.089
<i>Leverage</i>	-0.301***	-0.421***	-0.207*	-0.197
<i>Firm size</i>	0.147**	-0.209**	-0.264**	-0.254**
Observation	240	210	85	65

Note: *J11* = industry type 1 (sensitive, non-sensitive); *J12* = industry type 2 (manufacturing, non-manufacturing); *J13* = industry type 3 (sector 1-9); *J14* = industry type 4 (government ownership, non-government ownership). Significance at the *10%, ** 5%, and ***1% levels, respectively.

Table 4 shows the test results of the path analysis regarding the direct effect of industry types (*J11*, *J12*, *J13*, and *J14*) on ESG disclosure (ESG), as well as the interaction effect of *CEO power* and industry types (*CEO * J11*, *CEO * J12*, *CEO * J13*, and *CEO * J14*) on ESG disclosure (ESG). The results of direct effects tests show that *J11* had a positive effect on ESG (0.299, p-value = 0.001), governance (0.293, p-value = 0.001), and environmental (0.947, p-value = 0.01) dimensions. *J14* had a positive effect

only on ESG (0.261, p-value = 0.05) and the social dimension (0.500, p-value = 0.01). These findings are consistent with the correlation test results. The results also show that interactions between *J11* and *CEO power* were positive and significant both on ESG (0.211, p-value < 0.05) and governance (0.293, p-value = 0.01) dimensions. For control variables, only *leverage* (-0.139, p-value = 0.05) and *firm size* (0.184, p-value = 0.05) had a significant influence on ESG.

Table 4. Results of structural path

Variable	ESG	Governance	Social	Environmental
<i>J11</i>	0.299***	0.293***	-0.097	0.947***
<i>J12</i>	-0.091	-0.230	-0.013	-1.073
<i>J13</i>	-0.115	0.018	0.154	0.074
<i>J14</i>	0.261**	-0.179**	0.5***	-0.47**
<i>CEO power</i>	-0.130*	0.108	-0.278	-0.064
<i>CEO * J11</i>	0.211**	0.293***	-0.433	-0.058
<i>CEO * J12</i>	-0.224*	-0.193	0.059	-0.150
<i>CEO * J13</i>	0.322	0.157	0.204	0.025
<i>CEO * J14</i>	0.011	-0.058	-0.219	-0.071
<i>Profitability</i>	0.188*	0.057	0.089	0.114
<i>Leverage</i>	-0.139**	-0.526***	-0.024	0.301
<i>Firm size</i>	0.184**	0.061	-0.181	-0.840
Obs.	240	210	85	65
R ² (ARS)	0.555	0.415	0.535	0.519
APC	0.18	0.17	0.188	0.349
AVIF	3.214	3.393	5.202	7.865
Q square	0.393	0.377	0.617	0.69

Note: *J11* = industry type 1 (sensitive, non-sensitive); *J12* = industry type 2 (manufacturing, non-manufacturing); *J13* = industry type 3 (sector 1-9); *J14* = industry type 4 (government ownership, non-government ownership); APC = average path coefficient; ARS = average R-squared; AVIF = average block VIF = acceptable if <= 5, ideally <= 3.3. Significance at the *10%, ** 5%, and ***1% levels, respectively.

5. DISCUSSION

Based on the results of the Table 4, several conclusions can be drawn. First, the hypotheses *H1a* and *H1d* are supported. There is a positive relationship between industry type based on sensitivity (sensitive and non-sensitive), government ownership (government and non-government), and ESG disclosure. These results are in line with the findings of previous studies (Deegan & Gordon, 1996; Faisal et al., 2018; Reverte, 2009). The findings suggest that corporate ownership by the government has a greater influence on the level of ESG disclosure

non-government ownership (Baldini et al., 2018; Kotsantonis et al., 2016; Weber, 2013). Government ownership in companies that simultaneously act as regulators can perform control functions and force companies to increase ESG disclosure. The government's presence in a company plays a significant role in increasing ESG disclosures. The presence of the government motivates companies to comply with regulations related to social and environmental responsibility to improve the company image. This finding may indicate that ESG disclosure becomes a strategy for legitimizing the negative environmental impact of a company's activities. By enhancing ESG information, companies

can demonstrate their commitment to and concern for the environment and society. In this way, stakeholders will have the impression that the company's actions are in line with the company's goals. This will improve the company's image and reputation from the perspective of stakeholders.

Second, *H1b* and *H1c* are rejected. This study fails to demonstrate that companies in industries grouped into manufacturing and non-manufacturing sectors have a significant influence on ESG disclosure. This differs from prior studies (Kuzey & Uyar, 2017; Reverte, 2009). The finding suggests that companies in industries whose manufacturing processes have a negative impact on the environment do not provide more information, nor do they report more information than companies in other industries. Another possibility is that firms in manufacturing industries experience less pressure from stakeholders over their environmental performance, so the motivation for doing so leads to a lower level of ESG disclosure. In addition, companies in the consumer goods sector and other service sectors do not feel high pressure from external stakeholders regarding the impact of their operational activities on the environment. That is, they have low political costs. Manufacturing companies, for instance, feel more pressure from internal stakeholders, such as employees. In their view, it is the pressure of employees that needs to be more tended to than the environment.

Third, *H2* is rejected. The findings suggest that CEO power negatively influences ESG disclosures. The result is inconsistent with Li et al. (2018). The lack of influence of CEO permanence on the disclosure of ESG factors is probably due to the brevity of CEO factors in the company. Descriptive statistics for CEO tenure indicate that the average tenure of a CEO of a company is four to five years. Therefore, the direct influence of CEO power is not sufficiently influential to increase disclosure. These findings indicate that the short tenures of CEOs are unable to demonstrate their commitment to disclosing more ESG information as a means of addressing stakeholder demands. New CEOs are less likely to seek requests for voluntary disclosure than long-term CEOs. This is explained by the fact that they do not yet have a strong organizational culture or do not fully understand how to reduce stakeholder pressure on risk.

Fourth, *H3a* is supported. The results suggest that the interaction of CEO power and sensitive industries increases the level of ESG disclosure. This finding is consistent with Li et al. (2018). The presence of a CEO reinforces the influence of industry sensitivity on ESG disclosure. Industries that fall into the environmentally sensitive category tend to disclose environmental problems because they have the potential to harm the environment and are therefore vulnerable to more stringent regulations. To reduce the pressure exerted by these regulators, experienced CEOs can encourage businesses to become more involved in ESG activities.

Fifth, hypotheses *H3b*, *H3c*, and *H3d* are rejected. These results indicate that CEO characteristic factors such as tenure do not fully moderate the relationship between industry types

and ESG disclosures. The influence of the increased power or authority of a CEO has not been a decisive factor in enhancing disclosure. These results are different from the findings of Li et al. (2018).

6. CONCLUSION

This study investigates the influence of different types of industries (sensitivity levels, business types, industry sectors, and government ownership) on ESG disclosure. It also examines the moderating role of CEO power in the relationship between industry types and ESG disclosure. The results of this study demonstrate that industry grouping may have differing influences on ESG disclosure. Companies within environmentally sensitive industries and those owned by the government disclose more ESG information than non-sensitive/non-government-owned companies. These findings suggest that Indonesian companies that disclose ESG information remain motivated by legitimate factors. However, our research does not provide evidence that the classification of industries by type of business (manufacturing or non-manufacturing) or sectors (nine sectors) are determinants of ESG disclosure. The study also found that CEOs can boost sensitive industries to release more ESG information.

There are several implications to this study. First, the effects of industry classification have a major influence on the levels of disclosure of ESG factors. Differences in the classification of industries may have important management consequences. Indeed, the classification of industries may influence the behavior of CEOs from different industrial sectors. This classification may create an environment to deal with stakeholder pressures or vice versa. Industries that are sensitive and engage in activities that have negative connotations use the disclosure of ESG factors to change stakeholder perceptions by using legitimacy strategies. In this respect, the study contributes to the existing ESG literature by linking industry type and CEO power to ESG disclosure levels. These findings suggest that companies can disclose information to address public concerns and legitimize their operations when activities may or may not meet public expectations. Cuganesan et al. (2010) argue that voluntary disclosure of public information becomes more symbolic when the activities of a company have a greater social and environmental impact.

Second, these findings highlight a need for companies to consider the power of CEOs to encourage more ESG reporting. CEOs with significant power can encourage disclosure policies or greater transparency of information. Consequently, the considerable power of a CEO can strengthen the relationship between industry type and the disclosure of ESG factors. The managerial implications of this study are that in an effort to maintain legitimacy, companies require the involvement and commitment of CEOs with greater power.

This research has some limitations. First, the study measures the disclosure of ESG factors only in terms of their extent. Second, we studied industry type as classified into only four groups.

Therefore, there is a risk of bias when we combine those industries. Third, this study covers only one developing country, Indonesia. Future studies could use the approaches developed in this study to classify industries using different methods and evaluate their effect on levels of ESG disclosure. Further analysis is also needed to provide a detailed

overview and disclosure of ESG factors in terms of quantity and quality. Finally, future studies may consider conducting cross-national research to enrich these findings with data from other developing countries with a broader geographic reach, such as Asian countries in general.

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Reviewer's Report

Journal:	Journal of Governance and Regulation		
Title of the paper:	Industry Classifications and Environmental, Social, and Governance Disclosure: The Moderating Role of CEO Power		
Date of the Review completion:	17 August 2022		
Please choose options that can characterize the paper:			
Originality and importance of the paper to the field of research:	High		
The structure of the paper:	Is easy to follow and understand		
Please tick relevant for the abstract	The abstract provides an accurate summary of the manuscript (including aim, methods, key results and relevance of the study)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	The abstract contains unnecessary information (please explain)	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
	Is the abstract of appropriate size? (150-200 words)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Please tick relevant for the introduction	Does the introduction identify the purpose of the paper or hypothesis and set the paper within the broader research perspective?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
	The introduction puts the rest of the paper into perspective (explains paper's structure)	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
Methods used in the paper:	Suit the aim of the research		
	Does the methodology part allow replicating or reproducing results (to check them or to perform a similar study)?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	If empirical study: is the sample size large enough and was selected in an appropriate way (leave blank if not acceptable)?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Results and discussion:	Are the interpretations provided by the author(s) supported by the findings obtained in the study?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Are there any figures or tables that have to be corrected / deleted?	Yes, some corrections need to be done (please explain)		
	Are the figures and/or tables clear and you can understand their essence?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Conclusions:	Do not reveal main findings of the paper		
	Conclusions are supported by the findings, analysis and interpretations of the author(s)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	Does the conclusion section repeat the abstract of the paper?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
References	Are all references in the list used in the paper?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	Are the number, relevance and "age" of the citations appropriate?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
Language of the paper:	Is adequate (small mistakes)		
Length of the paper:	Is appropriate		
What is your main verdict?	Accept paper with the changes that should be made by the author/authors		
Field for the comments of the reviewer:			
<p>The main problem of this paper is that the literature used to present the topic and discuss the hypotheses development is not updated. The literature review as well as the introduction should include some most recent papers.</p> <p>We suggest to include at least the following ones:</p> <ul style="list-style-type: none"> - Carnini Pulino, S.; Ciaburri, M.; Magnanelli, B.S.; Nasta, L. Does ESG Disclosure Influence Firm Performance? <i>Sustainability</i> 2022, <i>14</i>, 7595. https://doi.org/10.3390/su14137595 - Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and Social Responsibility: A Review of ESG and CSR Research in Corporate. <i>Journal of Corporate Finance</i>. https://doi.org/10.1016/j.jcorpfin.2021.101889 			

- Mooneeapen, Oren, Abhayawansa, Subhash, Mamode Khan, Naushad; Sustainability Accounting, Management and Policy Journal, Volume 13, Number 4, **2022**, pp. 953-985(33) DOI: <https://doi.org/10.1108/SAMPJ-07-2021-0298>

Including those papers will also allow the authors to refer to other articles cited in those abovementioned, updating the whole part about literature review in their study.

In the abstract (at the end of it), the authors have to mention the managerial and practical implications of their study.

Additionally the authors should better underline in the introduction the gap existing in the literature, in order to make the relevance of their study stronger.

At the end of the introduction they should present the structure of the paper.

Some robustness check in the empirical analysis are needed in order to show how strong their results are.

Please, correct the typos, such as:

- ([Limkriangkrai, Koh, and Durand 2017, . p. 461](#)). → Double , with a no sense space

In sum, the paper is interesting and I suggest to accept it with the minor revisions I indicated. I hope my suggestions will help the authors to improve their work. Good luck!

Industry Classifications and Environmental, Social, and Governance Disclosure: The Moderating Role of CEO Power

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ABSTRACT

This study aims to investigate the moderating effect of chief executive officer (CEO) power on the relationship between industry classifications and environmental, social, and governance (ESG) disclosure using the legitimacy and institutional theories. Forty-eight public companies listed on the Indonesia Stock Exchange during the period 2012-2016 were analyzed via partial least squares. The results show that industry classifications have a significant effect on ESG disclosure. Specifically, companies in sensitive industries and companies for which the majority of the shares are owned by the government are likely to disclose more ESG information. Furthermore, our study also provides empirical evidence that CEO power plays a significant role in strengthening the relationship between industry classification and ESG disclosure. Surprisingly, CEOs of companies whose majority shares are owned by the government fail to demonstrate their role in encouraging higher disclosure of ESG. The results of this study have practical implications regarding the importance of the role of CEO power in increasing companies' commitments to disclose ESG activities. This study provides new insights into the role of CEO characteristics in the relationship between industry types and ESG disclosure for Indonesian companies.

Keywords: ESG, CSR, sustainability, industry, CEO, legitimacy, institutional, Indonesia

Introduction

In recent years, issues related to the motives and benefits of the disclosure of non-financial information such as environmental, social, and corporate governance (ESG)¹ information have become an interesting topic for both academics and practitioners (Miralles-Quiros, Miralles-Quiros, and Arraiano 2017; Murphy and McGrath 2013; Fatemi, Glaum, and Kaiser 2018). Several previous studies have reported survey results related to the benefits of ESG information. A survey conducted by Duuren, Plantinga, and Scholtens (2016) shows that over 50% of asset managers in

¹ Environmental and social governance (ESG) terminology is used throughout this paper, including “corporate social environmental responsibility” and “sustainability.”

the US and Europe use ESG data as red flags for evaluating a given company's stocks. Similarly, [Amel-Zadeh and Serafeim \(2018\)](#) and [Al Hawaj and Buallay \(2021\)](#) concluded that a company's ESG information is used to evaluate investment performance and product strategy decisions. While these surveys document the perceived benefits of having ESG information, many companies remain reluctant to disclose ESG information to the public ([Gunawan 2015](#); [Hanifa and Cahaya 2016](#)). Previous studies have concluded that there are several reasons for companies to conduct disclosure activities, such as increase transparency and accountability, improved reputation and legitimacy, improved business practice and performance, increase brand and customer loyalty, reduce costs ([Hrasky 2011](#); [Faisal, Napitupulu, and Chariri 2019](#); [Kuo and Chen 2013](#); [Rahman and Alsayegh 2021](#)). Other reasons such as massive industrialization, dwindling resources, damaged ecosystems and exploited labor are also a determining factor for company to disclose ESG factors ([Khan et al. 2021](#)). The motives of legitimacy and accountability are created due to institutional pressures ([Cormier, Magnan, and Van Velthoven 2005](#); [Tilt 1994](#); [Milne and Patten 2002](#); [Waris, George, and Zeeshan 2017](#)). Pressure from a variety of stakeholders has prompted companies to integrate ESG practices into their operations. It is not surprising that various industrial sectors have adapted their activities and operations in line with the perspective of sustainability ([Li, Pinto, and Diabat 2020](#)), including reporting ESG-related activities. Environmental activities (E) involve a company's efforts to positively impact the environment by complying with existing regulations and recognizing future impacts. Social activities (S) are the equitable treatment of relevant stakeholders and the protection of the social ecosystem in which the company operates. Governance (G) integrates corporate ethics and integrity, including principles like transparency and fair dealing, and the effective functioning of the board of directors ([Limkriangkrai, Koh, and Durand 2017](#), , p. 461).

Indonesia presents an interesting case in which to explore the determinants of ESG disclosures. For some time, Indonesian companies have been confronted with a number of factors that expose them to ESG practices ([Faisal et al. 2018](#)). These are issues such as pollution, deforestation, social and political insecurity, and corruption ([Djajadikerta and Trireksani 2012](#)). Despite these issues, since 2017, the Government of Indonesia has continuously committed to implementing ESG rules in investment and business practices such as the Government Regulation Number 47/2012 related to the obligation of companies to implement the corporate social responsibility; the Financial Services Authority (Financial Services Authority) rule Number 60 /POJK.04/2017 regarding the implementation of sustainability finance for financial services institutions.

This paper aims to test the relationship between types of industry and ESG disclosure. The industry sector plays a significant role by influencing ESG disclosure activities ([Velte 2017](#)). However, the findings of prior studies are varied. For example, several findings suggest that the sensitivity of an industry has a positive effect on ESG disclosure ([Garcia, Mendes-Da-Silva, and Orsato 2017](#); [Reverte 2008](#); [Kuo and Chen 2013](#); [Faisal et al. 2018](#)). Other research has found that the manufacturing sector discloses less environmental information ([Cowen, Ferreri, and Parker 1987](#)). [Baldini et al. \(2018\)](#) argue that the analysis of factors affecting ESG disclosure practices should be limited in relation to certain types of industries. This variegation of findings means that study on the effects of the industry sector on ESG disclosure is still relevant. In addition, various studies have been conducted related to ESG information disclosure practices, mainly in developed countries in continental Europe ([Buallay 2019](#); [Velte 2016](#); [Camilleri 2015](#)) and the US ([Manita et al. 2018](#)). Several studies have been conducted in developing countries in Latin American ([Husted and Sousa-Filho 2017](#)), BRICS countries (Brazil, Russia, India, China, South Africa) ([Garcia, Mendes-Da-Silva, and Orsato 2017](#)), Egypt ([Aboud and Diab 2018](#)), Tunisia ([Khemir,](#)

Baccouche, and Ayadi 2019), and Malaysia (Atan et al. 2018). In Indonesia, however, research related to ESG disclosure practices remains very limited (Purwantini et al. 2019). Thus, current study would enrich the ESG disclosure literature; It is because that institutional backgrounds, such as voluntary or mandatory, may also produce different results than previous studies (Khan, Bose, and Johns 2019; Singhanian and Saini 2021).

Previous studies show that the level of ESG disclosure in Indonesia remains low (Hanifa and Cahaya 2016) to moderate (Ika, Dwiwinarno, and Widagdo 2017; Trireksani and Djajadikerta 2016; Faisal et al. 2018). One reason for this is the low awareness of managers of companies in Indonesia about ESG issues (Gunawan 2015). The awareness and involvement of chief executive officers (CEOs) is important. To release quality ESG information, companies require a competent CEO who has the knowledge, experience, skills, and professionalism to balance strategic and business decisions with the ESG issues facing a company (Lewis, Walls, and Dowell 2014; Li et al. 2018). CEOs with greater power can enhance the value of a business by providing ESG information to key corporate stakeholders, such as investors (Li et al. 2018). Results from previous research still show inconsistency related to the CEO's role in enhancing ESG disclosure. Duuren, Plantinga, and Scholtens (2016) argue that the CEO plays an important role in the investment process and risk control. It is expected that CEO power may be an important factor that can moderate the relationship between industry type and ESG disclosure, thus provide a motivation for this study. This is based on the conclusion of a previous study that a company's improved performance is not only due to ESG disclosure practices but can also be due to the influence of the greater power or authority of the CEO (Li et al. 2018). The results of this study may provide new insights into the role of CEO characteristics in the relationship between industry types and ESG disclosure for Indonesian companies.

Based on the explanations above, this study tests whether industry types and CEO power directly affect ESG disclosure and whether CEO power moderates the relationship between industry type and ESG disclosure using the legitimacy and institutional theories. Legitimacy theory has been used to explain the influence of company characteristics on ESG disclosure (Adams, Hill, and Roberts 1998; Baldini et al. 2018; Branco and Rodrigues 2008; Claasen and Roloff 2012; Milne and Patten 2002). ESG disclosure can be explained by the legitimacy theory as it becomes a strategy to protect the legitimacy of a company. ESG disclosure can overcome pressure from stakeholders who need such information (Baldini et al. 2018; Lokuwaduge and Heenetigala 2016; Tilt 1994) and can also be used as an important tool for improving performance (Weber 2013; Clarkson et al. 2008). However, practically, only a small part of the ESG issue can be described "materially" in order to create "relevant value" for each industry (Kotsantonis, Pinney, and Serafeim 2016). Therefore, companies need to be encouraged to disclose ESG more fully and transparently (McBrayer 2018). Gunawan (2015) shows that the main motivation of corporate social responsibility disclosure in Indonesia is to create a positive image. Furthermore, her results indicate that companies still do not trust the benefits of disclosing social responsibility and are instead reluctant to provide information because it increases costs.

Besides the legitimacy theory, institutional theory is also broadly adopted in studies related to the disclosure of ESG factors. According to institutional theory,

Literature review and hypothesis development

Legitimacy theory may explain practices and strategies for disclosure of ESG factors (Garcia, Mendes-Da-Silva, and Orsato 2017). Deegan and Gordon (1996) state that low investment in ESG

factors has resulted in consistently low social and environmental disclosure. On the other hand, disclosure of ESG factors may be an effort on the part of firms to create a good reputation (Hasseldine, Salama, and Toms 2005; Kuzey and Uyar 2017). Managers play a significant role in the legitimization of corporations by managing the content of the information disclosed (Deegan and Gordon 1996; Richardson and Welker 2001). A number of studies on ESG factors have been conducted. This includes research on factors that determine the level of ESG disclosure—for example, studies on the determinants of ESG (Baldini et al. 2018), internal factors (Adams 2002; Faisal and Achmad 2014; Li et al. 2018), and the impact of ESG disclosure on financial performance (Garcia, Mendes-Da-Silva, and Orsato 2017) and firm values (Clarkson et al. 2013; Li et al. 2018)—and research into why and how investors use ESG (Amel-Zadeh and Serafeim 2018).

Industry variations have an effect on ESG disclosure levels (Gamerschlag, Möller, and Verbeeten 2011). Companies classified as being part of sensitive industries have better ESG indicators across all three dimensions of ESG. Companies classified as being part of sensitive industries achieve superior environmental performance compared to companies classified as being part of non-sensitive industries (Garcia, Mendes-Da-Silva, and Orsato 2017). Richardson and Welker (2001) and Deegan and Gordon (1996) found that companies classified as being in sensitive industries express more consistent socio-environmental practices as a way of legitimizing their operations as the sector has a significant socio-environmental impact. The more sensitive the industry a company is in, the more the company will increase ESG disclosure in order to explain its social responsibility. However, Giovanna and Alfredo (2015) argue that there is no difference in the level of ESG disclosure between manufacturing and non-manufacturing family firms. In addition, non-family manufacturing firms are more active compared to non-manufacturing companies in terms of ESG disclosure. The higher disclosure level of non-family manufacturing firms may be caused by the impact of the manufacturing production process and the waste it produces to the surrounding environment.

According to the Bloomberg database, a company is classified into one of nine industrial sectors. Adams, Hill, and Roberts (1998) show that the social disclosure of each sector is varied. The manufacturing sector discloses the most, while the service/retail/food industry sector discloses the least. Gamerschlag, Möller, and Verbeeten (2011) found that companies that produce consumer goods and energy providers engage in more social disclosure than other industrial sectors. Meanwhile, service sector companies such as insurance firms, software companies, and the technology industry tend to reveal less ESG information. The issue of pressure on ESG disclosure arises in companies that have a variety of holdings that are owned partly by companies and partly by the government as compared to companies without government ownership. The government having a control function in a company encourages companies to conduct ESG disclosure more often and to be better over time (Weber 2013; Kotsantonis, Pinney, and Serafeim 2016; Baldini et al. 2018). According to legitimacy theory, companies in the consumer goods, energy, and mining sectors expose their public positions and strive to reduce political costs and external pressures through ESG disclosure. Increased disclosure is intended to legitimize companies' existence (Carels, Maroun, and Padia 2013). In sum, each type of industry has its own characteristics, resulting in different impacts from its operating activities. The greater the environmental and community impact, the greater the disclosure.

H1a: Industry type based on sensitivity level affects ESG disclosure.

H1b: Industry type based on business type affects ESG disclosure.

H1c: Industry type based on sector affects ESG disclosure.

H1d: Industry type based on the existence of government ownership affects ESG disclosure.

One of the internal factors that affects disclosure is support from top management. [Adams \(2002\)](#) argues that CEOs as decision makers play a significant role in driving ESG activities and disclosures. The power CEO is defined as the CEO's ability to overcome resistance and consistently influence key corporate decisions ([Haleblian and Finkelstein 1993](#)). A powerful CEO has much control and influence over other managers and directors of the company's overall business management ([Baldenius, Melumad, and Meng 2014](#)). The powerful CEOs have stronger motivation to govern ESG disclosure practices to demonstrate their commitment to stakeholders' concerns ([Li et al. 2018](#); [Duuren, Plantinga, and Scholtens 2016](#)). [Lewis, Walls, and Dowell \(2014\)](#) suggest that CEO characteristics play an important role in mitigating external stakeholder pressures. For example, CEOs who have increased power and capacity will make better decisions to maintain organizational continuity. Furthermore, more experienced CEOs tend to have a better ability to understand a company's conditions, allowing them to reduce institutional pressures on stakeholders by disclosing ESG information ([Lewis, Walls, and Dowell 2014](#)).

H2: CEO power affects ESG disclosure.

Companies classified as being in sensitive industries have better levels of ESG disclosure than non-sensitive companies ([Adams, Hill, and Roberts 1998](#); [Garcia, Mendes-Da-Silva, and Orsato 2017](#)). [Giovanna and Alfredo \(2015\)](#) found that the disclosure of manufacturing companies is higher than non-manufacturing companies. [Carels, Maroun, and Padia \(2013\)](#) argue that mining companies outperform in communicating environmental issues compared to other sectors. The existence of government shares as a controller in the company shows a positive and significant influence on the level of disclosure of ESG information ([Baldini et al. 2018](#); [Kotsantonis, Pinney, and Serafeim 2016](#); [Weber 2013](#)). Higher levels of disclosure aim to create a good reputation ([Hasseldine, Salama, and Toms 2005](#)). The CEO plays an important role in disclosing such ESG information to manage impressions of stakeholders by directing the content of the information conveyed ([Carels, Maroun, and Padia 2013](#)).

H3a: CEOs' power moderates the relationship between industry type based on sensitivity and ESG disclosure.

H3b: CEOs' power moderates the relationship between industry type based on business type and ESG disclosure.

H3c: CEOs' power moderates the relationship between industry type based on sector and ESG disclosure.

H3d: CEOs' power moderates the relationship between industry type based on the existence of government ownership and ESG disclosure.

Methods

The research population is all 540 companies listed on the Indonesia Stock Exchange as of December 31, 2016. Of these 540 companies, 492 did not have complete data on ESG scores. Thus, the number of samples is 48 companies. Given that this study was carried out during the period 2012-2016, the total sample is 240. These 240 companies are categorized based on industry sector. Table 1 presents the measurement of variables. The ESG scores are sourced from

Bloomberg databases (Baldini et al. 2018; McBrayer 2018; Fatemi, Glaum, and Kaiser 2018). The ESG scores from the Bloomberg database are adjusted according to different industry sectors. This allows variations between industries for each industry to be minimized (Baldini et al. 2018). CEO power is measured by the tenure of a CEO (McBrayer 2018). The industry variables and control variables are measured by referring to previous studies (see Table 1). In this study, hypothesis testing uses the partial least squares (PLS) approach. PLS is a suitable method to test moderating effects when a feature is available to complement an indirect effect with various options. It also enables researchers to simultaneously test the relations between variables (Solovida and Latan 2017). In contrast to other multivariate techniques, PLS is not dependent on the hypothesis of normality. However, assumptions such as multicollinearity and the quality of the fit indices need to be taken into account in the evaluation of the local model (Latan et al. 2018).

$$ESG = \beta_0 + \beta_1JI1 + \beta_2JI2 + \beta_3JI3 + \beta_4JI4 + \beta_5CEO + \beta_6JI1*CEO + \beta_7JI2*CEO + \beta_8JI3*CEO + \beta_9JI4*CEO + \beta_{10}Pr + \beta_{11}Le + \beta_{12}Sz + \varepsilon$$

$$ESG = \beta_0 + \beta_1JI1 + \beta_2JI2 + \beta_3JI3 + \beta_4JI4 + \beta_5CEO + \beta_6JI1*CEO + \beta_7JI2*CEO + \beta_8JI3*CEO + \beta_9JI4*CEO + \beta_{10}Pr + \beta_{11}Le + \beta_{12}Sz + \varepsilon$$

Table 1. Variable measurement

Variable	Measurement	Source
ESG	Bloomberg ESG score	Baldini et al. (2018)
CEO power	Tenure of CEO	McBrayer (2018)
Industry type (JI1)	0 = non-sensitive 1 = sensitive	Faisal et al. (2018)
Industry type (JI2)	0 = manufacturing 1 = non-manufacturing	Weber (2013)
Industry type (JI3)	1 = agriculture (plantation) 2 = basic industry and chemicals 3 = customer goods 4 = infrastructure utility and transportation 5 = mining 6 = miscellaneous 7 = finance 8 = property real estate and building construction 9 = trade services and investment.	Weber (2013)
Industry type (JI4)	0 = non-government ownership 1 = government ownership	Weber (2013)
Profitability	ROA = Net income divided by total assets	Faisal et al. (2018)
Leverage	Total liability divided by total assets	Faisal et al. (2018)
Firm size	LnTotal assets	Faisal et al. (2018)

Results and discussion

Table 2 presents the descriptive statistics of the variables. For five consecutive years (2012-2016), the number of companies that disclosed environmental information was 13 (65 observations); social information was 17 (85 observations); governance information was 42 (210 observations); ESG information was 48 (240 observations). In terms of the level of disclosure per year, this study found that the mean (median) disclosure of ESG information was as follows: 16.07 (10.19); 17.22 (11.16); 18.08 (11.16); 19.15 (11.16); 20.36 (11.32). In general, the mean of ESG disclosure indicates a positive trend from year to year. The results also indicate that the contents of ESG disclosure are varied, with governance being the most-disclosed item, followed by social issues and environmental-related information as the least disclosed by companies in Indonesia. The variation of disclosure may indicate a lack of uniformity of ESG reporting standards ([Lokuwaduge and Heenetigala 2016](#)). The mean (median) of CEO tenure showed that the median tenure of CEOs is 5.06 (4.00) years. These results indicate that a CEO's tenure is relatively short. For control variables, the descriptive statistics show that on average, a sample company has a relatively low level of profitability, high leverage, and relatively small size.

Table 2. Descriptive statistics

Variable	Year	n	Mean	Median	Std. deviation	Minimum	Maximum
ESG (%)	2012	48	16.07	10.19	11.61	5.79	48.76
	2013	48	17.22	11.16	11.77	6.61	52.89
	2014	48	18.08	11.16	12.28	6.61	51.65
	2015	48	19.15	11.16	13.10	6.61	54.13
	2016	48	20.36	11.32	13.32	6.61	51.65
	Total	240	18.18	11.16	12.42	5.79	54.13
Environmental (%)	2012	13	19.39	14.73	14.32	2.33	46.51
	2013	13	18.41	12.40	14.46	2.33	51.94
	2014	13	18.89	14.73	14.73	2.33	55.81
	2015	13	21.75	14.73	14.71	6.98	55.81
	2016	13	20.91	14.73	14.28	6.20	54.26
	Total	65	19.87	14.73	14.10	2.33	55.81
Social (%)	2012	17	28.67	22.81	14.73	7.02	49.12
	2013	17	29.62	22.81	14.12	7.02	52.63
	2014	17	31.68	22.07	15.06	7.02	52.63
	2015	17	32.44	32.23	12.95	7.02	54.39
	2016	17	32.51	33.33	13.48	7.02	54.39
	Total	85	30.98	28.07	13.84	7.02	54.39
Governance (%)	2012	42	40.66	42.86	13.01	8.68	75.00
	2013	42	42.50	42.86	12.83	9.92	69.64
	2014	42	42.96	42.86	12.69	9.92	67.86
	2015	42	42.63	42.86	12.68	9.92	67.86
	2016	42	43.22	42.86	12.53	9.92	67.86
	Total	210	42.45	42.86	12.73	8.68	75.00

Variable	Year	n	Mean	Median	Std. deviation	Minimum	Maximum
CEO power (year)	Total	210	42.39	42.86	12.66	8.68	75.00
	2012	48	4.53	3.54	3.55	.42	17.50
	2013	48	5.11	3.54	3.81	.58	18.50
	2014	48	5.22	4.64	3.90	.25	19.50
	2015	48	5.16	4.00	4.21	.67	20.50
	2016	48	5.27	4.00	4.32	.25	21.50
	Total	240	5.06	4.00	3.94	.25	21.50
Profitability (%)	2012	48	11.39	8.12	11.97	-16.43	43.08
	2013	48	7.42	5.48	9.37	-23.53	43.36
	2014	48	6.44	4.22	8.55	-10.14	43.93
	2015	48	3.29	3.06	8.74	-22.73	39.00
	2016	48	4.55	3.31	7.73	-17.15	39.36
	Total	240	6.62	4.73	9.72	-23.53	43.93
	2012	48	6.03	.55	11.18	.02	54.99
Leverage (%)	2013	48	7.60	.50	14.25	.00	56.91
	2014	48	8.71	.54	14.33	.02	49.83
	2015	48	9.33	.50	17.41	.03	79.14
	2016	48	9.36	.44	17.24	.00	75.76
	Total	240	8.21	.50	14.98	.00	79.14
Firm size (Ln)	2012	48	4.11	4.16	.77	1.64	5.80
	2013	48	4.17	4.17	.75	1.56	5.87
	2014	48	4.23	4.22	.77	1.53	5.93
	2015	48	4.27	4.24	.76	1.58	5.96
	2016	48	4.29	4.30	.77	1.64	6.02
	Total	240	4.22	4.22	.76	1.53	6.02

Table 3 shows the correlations matrix between industry type variables (JI1, JI2, JI3, and JI4), CEO power (CEO), profitability, leverage, firm size, ESG disclosure, and each dimension of ESG. Table 3 shows that all industry group variables have a positive and significant correlation at the significant level of 1%, except for industry types based on business sectors, which have negative correlations with ESG disclosure. CEO power is negatively correlated and significant at the level of 1% with ESG, social, and environmental. For variable control, leverage and firm size have correlations with ESG disclosure at the significant levels of 1% and 5%. Overall, these results are in line with predictions that industry types and CEO power have a positive correlation with ESG.

Table 3. Correlation matrix

Variable	ESG	Governance	Social	Environmental
JI1	0.375***	0.431***	0.399***	0.56***
JI2	0.159**	0.318***	0.120	0.199

Jl3	-0.275***	-0.247***	0.176	-0.009
Jl4	0.414***	-0.217***	0.597***	0.193
CEO power	-0.202***	-0.014	-0.244**	-0.322***
Profitability	0.109*	0.095	0.174	-0.089
Leverage	-0.301***	-0.421***	-0.207*	-0.197
Firm size	0.147**	-0.209***	-0.264**	-0.254**
Observation	240	210	85	65

Notes: Jl1 = industry type 1 (sensitive, non-sensitive); Jl2 = industry type 2 (manufacturing, non-manufacturing); Jl3 = industry type 3 (sector 1-9); Jl4 = industry type 4 (government ownership, non-government ownership).
Significance at the *10%, ** 5%, and ***1% levels, respectively

Table 4 shows the test results of the path analysis regarding the direct effect of industry types (Jl1, Jl2, Jl3, and Jl4) on ESG disclosure (ESG), as well as the interaction effect of CEO power and industry types (CEO*Jl1, CEO*Jl2, CEO*Jl3, and CEO*Jl4) on ESG disclosure (ESG). The results of direct effects tests show that Jl1 had a positive effect on ESG (0.299, p value = 0.001), governance (0.293, p value = 0.001), and environmental (0.947, p value = 0.01) dimensions. Jl4 had a positive effect only on ESG (0.261, p value = 0.05) and the social dimension (0.500, p value = 0.01). These findings are consistent with the correlation test results. The results also show that interactions between Jl1 and CEO power were positive and significant both on ESG (0.211, p value < 0.05) and governance (0.293, p value = 0.01) dimensions. For control variables, only leverage (-0.139, p value = 0.05) and firm size (0.184, p value = 0.05) had a significant influence on ESG.

Table 4. Results of structural path

Variable	ESG	Governance	Social	Environmental
Jl1	0.299***	0.293***	-0.097	0.947***
Jl2	-0.091	-0.230	-0.013	-1.073
Jl3	-0.115	0.018	0.154	0.074
Jl4	0.261**	-0.179**	0.5***	-0.47**
CEO power	-0.130*	0.108	-0.278	-0.064
CEO*Jl1	0.211**	0.293***	-0.433	-0.058
CEO*Jl2	-0.224*	-0.193	0.059	-0.150
CEO*Jl3	0.322	0.157	0.204	0.025
CEO*Jl4	0.011	-0.058	-0.219	-0.071
Profitability	0.188*	0.057	0.089	0.114
Leverage	-0.139**	-0.526***	-0.024	0.301
Firm size	0.184**	0.061	-0.181	-0.840
Obs	240	210	85	65
R ² (ARS)	0.555	0.415	0.535	0.519
APC	0.18	0.17	0.188	0.349
AVIF	3.214	3.393	5.202	7.865
Q square	0.393	0.377	0.617	0.69

Variable	ESG	Governance	Social	Environmental
Notes: JI1 = industry type 1 (sensitive, non-sensitive); JI2 = industry type 2 (manufacturing, non-manufacturing); JI3 = industry type 3 (sector 1-9); JI4 = industry type 4 (government ownership, non-government ownership); APC = <i>average path coefficient</i> ; ARS = <i>average R squared</i> ; AVIF = <i>average block VIF = acceptable if ≤ 5, ideally ≤ 3.3</i>				
Significance at the *10%, ** 5%, and ***1% levels, respectively				

Based on the results of the Table 4, several conclusions can be drawn. First, the hypotheses H1a and H1d are supported. There is a positive relationship between industry type based on sensitivity (sensitive and non-sensitive), government ownership (government and non-government), and ESG disclosure. These results are in line with the findings of previous studies (e.g. [Faisal et al. 2018](#); [Reverte 2008](#); [Deegan and Gordon 1996](#)). The findings suggest that corporate ownership by the government has a greater influence on the level of ESG disclosure non-government ownership (e.g. [Baldini et al. 2018](#); [Weber 2013](#); [Kotsantonis, Pinney, and Serafeim 2016](#)). Government ownership in companies that simultaneously act as regulators can perform control functions and force companies to increase ESG disclosure. The government's presence in a company plays a significant role in increasing ESG disclosures. The presence of the government motivates companies to comply with regulations related to social and environmental responsibility to improve the company image. This finding may indicate that ESG disclosure becomes a strategy for legitimizing the negative environmental impact of a company's activities. By enhancing ESG information, companies can demonstrate their commitment to and concern for the environment and society. In this way, stakeholders will have the impression that the company's actions are in line with the company's goals. This will improve the company's image and reputation from the perspective of stakeholders.

Second, H1b and H1c are rejected. This study fails to demonstrate that companies in industries grouped into manufacturing and non-manufacturing sectors have a significant influence on ESG disclosure. This differs from prior studies ([Reverte 2008](#); [Kuzey and Uyar 2017](#)). The finding suggests that companies in industries whose manufacturing processes have a negative impact on the environment do not provide more information, nor do they report more information than companies in other industries. Another possibility is that firms in manufacturing industries experience less pressure from stakeholders over their environmental performance, so the motivation for doing so leads to a lower level of ESG disclosure. In addition, companies in the consumer goods sector and other service sectors do not feel high pressure from external stakeholders regarding the impact of their operational activities on the environment. That is, they have low political costs. Manufacturing companies, for instance, feel more pressure from internal stakeholders, such as employees. In their view, it is the pressure of employees that needs to be more tended to than the environment.

Third, H2 is rejected. The findings suggest that CEO power negatively influences ESG disclosures. The result is inconsistent with [Li et al. \(2018\)](#). The lack of influence of CEO permanence on the disclosure of ESG factors is probably due to the brevity of CEO factors in the company. Descriptive statistics for CEO tenure indicate that the average tenure of a CEO of a company is four to five years. Therefore, the direct influence of CEO power is not sufficiently influential to increase disclosure. These findings indicate that the short tenures of CEOs are unable to demonstrate their commitment to disclosing more ESG information as a means of addressing stakeholder demands. New CEOs are less likely to seek requests for voluntary disclosure than long-term CEOs. This is explained by the fact that they do not yet have a strong organizational culture or do not fully understand how to reduce stakeholder pressure on risk.

Fourth, H3a is supported. The results suggest that the interaction of CEO power and sensitive industries increases the level of ESG disclosure. This finding is consistent with [Li et al. \(2018\)](#). The presence of a CEO reinforces the influence of industry sensitivity on ESG disclosure. Industries that fall into the environmentally sensitive category tend to disclose environmental problems because they have the potential to harm the environment and are therefore vulnerable to more stringent regulations. To reduce the pressure exerted by these regulators, experienced CEOs can encourage businesses to become more involved in ESG activities.

Fifth, hypotheses H3b, H3c, and H3d are rejected. These results indicate that CEO characteristic factors such as tenure do not fully moderate the relationship between industry types and ESG disclosures. The influence of the increased power or authority of a CEO has not been a decisive factor in enhancing disclosure. These results are different from the findings of [Li et al. \(2018\)](#).

Conclusion

This study investigates the influence of different types of industries (sensitivity levels, business types, industry sectors, and government ownership) on ESG disclosure. It also examines the moderating role of CEO power in the relationship between industry types and ESG disclosure. The results of this study demonstrate that industry grouping may have differing influences on ESG disclosure. Companies within environmentally sensitive industries and those owned by the government disclose more ESG information than non-sensitive/non-government-owned companies. These findings suggest that Indonesian companies that disclose ESG information remain motivated by legitimate factors. However, our research does not provide evidence that the classification of industries by type of business (manufacturing or non-manufacturing) or sectors (nine sectors) are determinants of ESG disclosure. The study also found that CEOs can boost sensitive industries to release more ESG information.

There are several implications to this study. First, the effects of industry classification have a major influence on the levels of disclosure of ESG factors. Differences in the classification of industries may have important management consequences ([Amato and Amato 2007](#)). Indeed, the classification of industries may influence the behavior of CEOs from different industrial sectors. This classification may create an environment to deal with stakeholder pressures or vice versa. Industries that are sensitive and engage in activities that have negative connotations use the disclosure of ESG factors to change stakeholder perceptions by using legitimacy strategies. In this respect, the study contributes to the existing ESG literature by linking industry type and CEO power to ESG disclosure levels. These findings suggest that companies can disclose information to address public concerns and legitimize their operations when activities may or may not meet public expectations. [Cuganesan, Guthrie, and Ward \(2010\)](#) argue that voluntary disclosure of public information becomes more symbolic when the activities of a company have a greater social and environmental impact.

Second, these findings highlight a need for companies to consider the power of CEOs to encourage more ESG reporting. CEOs with significant power can encourage disclosure policies or greater transparency of information. Consequently, the considerable power of a CEO can strengthen the relationship between industry type and the disclosure of ESG factors. The managerial implications of this study are that in an effort to maintain legitimacy, companies require the involvement and commitment of CEOs with greater power.

This research has some limitations. First, the study measures disclosure of ESG factors only in terms of their extent. Second, we studied industry type as classified into only four groups. Therefore, there is a risk of bias when we combine those industries. Third, this study covers only one developing country, Indonesia. Future studies could use the approaches developed in this study to classify industries using different methods and evaluate their effect on levels of ESG disclosure. Further analysis is also needed to provide a detailed overview and disclosure of ESG factors in terms of quantity and quality. Finally, future studies may consider conducting cross-national research to enrich these findings with data from other developing countries with a broader geographic reach, such as Asian countries in general.

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Reviewer's Report

Journal:	Journal of Governance and Regulation		
Title of the paper:	Industry Classifications and Environmental, Social, and Governance Disclosure: The Moderating Role of CEO Power		
Date of the Review completion:	17 August 2022		
Please choose options that can characterize the paper:			
Originality and importance of the paper to the field of research:	Medium		
The structure of the paper:	Is easy to follow and understand		
Please tick relevant for the abstract	The abstract provides an accurate summary of the manuscript (including aim, methods, key results and relevance of the study)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	The abstract contains unnecessary information (please explain)	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
	Is the abstract of appropriate size? (150-200 words)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Please tick relevant for the introduction	Does the introduction identify the purpose of the paper or hypothesis and set the paper within the broader research perspective?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	The introduction puts the rest of the paper into perspective (explains paper's structure)	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
Methods used in the paper:	Suit the aim of the research		
	Does the methodology part allow replicating or reproducing results (to check them or to perform a similar study)?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	If empirical study: is the sample size large enough and was selected in an appropriate way (leave blank if not acceptable)?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Results and discussion:	Are the interpretations provided by the author(s) supported by the findings obtained in the study?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Are there any figures or tables that have to be corrected / deleted?	Yes, some corrections need to be done (please explain)		
	Are the figures and/or tables clear and you can understand their essence?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Conclusions:	Explain main findings of the paper and are formulated correctly		
	Conclusions are supported by the findings, analysis and interpretations of the author(s)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	Does the conclusion section repeat the abstract of the paper?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
References	Are all references in the list used in the paper?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
	Are the number, relevance and "age" of the citations appropriate?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
Language of the paper:	Is adequate (small mistakes)		
Length of the paper:	Is appropriate		
What is your main verdict?	Accept paper with the changes that should be made by the author/authors		
Field for the comments of the reviewer:			
<p>The paper is interesting. It provides the motivation and aims of the paper in the introduction.</p> <p>Literature review's late study is up to the 2018 year. Please renew the references of the literature review up to 2021. Also, the way author(s) end up to the hypotheses should be clearer and easier to identify. I mean that it is needed a link sentence before the hypothesis is expressed.</p> <p>The method used is appropriate and well presented.</p> <p>The measurement of variables should be presented better. Sources such as Bloomberg should be mentioned.</p>			

Descriptive statistics and correlation matrix are appropriate and well-presented. Table 4 contains the main results of the study. Author(s) use interactions and control variables. These two kinds of variables should be mentioned and distinguished clearly in the manuscript. Why in the four regressions used the same control variables and interactions? Could you please explain further? The results are compared with previous studies which is good.

Conclusion presents the main findings, implications and limitations of the study. These are provided clearly and in an acceptable format.

Industry Classifications and Environmental, Social, and Governance Disclosure: The Moderating Role of CEO Power

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ABSTRACT

This study aims to investigate the moderating effect of chief executive officer (CEO) power on the relationship between industry classifications and environmental, social, and governance (ESG) disclosure using the legitimacy theory. Forty-eight public companies listed on the Indonesia Stock Exchange during the period 2012-2016 were analyzed via partial least squares. The results show that industry classifications have a significant effect on ESG disclosure. Specifically, companies in sensitive industries and companies for which the majority of the shares are owned by the government are likely to disclose more ESG information. Furthermore, our study also provides empirical evidence that CEO power plays a significant role in strengthening the relationship between industry classification and ESG disclosure. Surprisingly, CEOs of companies whose majority shares are owned by the government fail to demonstrate their role in encouraging higher disclosure of ESG. *The managerial implication of this finding suggested that CEO power may be an effective mechanism in increasing companies' commitments to disclose ESG activities. This study has practical implication by providing new insights into the role of CEO characteristics in the relationship between industry types and ESG disclosure for Indonesian companies.*

Keywords: ESG, CSR, sustainability, industry, CEO, legitimacy, Indonesia

JEL Classification: M14, M40, M41, M48

Author's individual contributions: Conceptualization – CP, FF, CJ, and IJ; Methodology – CP, FF, CJ, and IJ; Investigation – CP, FF, CJ, and IJ; Writing-original draft – CP, FF, CJ, and IJ; Writing-review & editing – CP, FF, CJ, and IJ; Project administration – CP, FF, and IJ; Funding acquisition – CP, FF, CJ, and IJ.

1. INTRODUCTION

In recent years, issues related to the motives and benefits of the disclosure of non-financial information such as environmental, social, and corporate governance (ESG)¹ information have become an interesting topic for both academics and practitioners (Fatemi, Glaum, & Kaiser, 2018; Miralles-Quiros, Miralles-Quiros, & Arraiano, 2017). Several previous studies have reported survey results related to the benefits of ESG information. A survey conducted by Duuren, Plantinga, and Scholtens (2016) shows that over 50% of asset managers in the US and Europe use ESG data as red flags for evaluating a given company's stocks. Similarly, Amel-Zadeh and Serafeim (2018) and Al Hawaj and Buallay (2021) concluded that a company's ESG information is used to evaluate investment performance and product strategy decisions. While these surveys document the perceived benefits of having ESG information, many companies remain reluctant to disclose ESG information to the public (Gunawan, 2015; Hanifa & Cahaya, 2016). Previous studies have concluded that there are several reasons for companies to conduct disclosure activities, such as increase transparency and accountability, improved reputation and legitimacy, improved business practice and performance, increase brand and customer loyalty, reduce costs (Faisal, Napitupulu, & Chariri, 2019; Hrasky, 2011; Kuo & Chen, 2013; Rahman & Alsayegh, 2021). Other reasons such as massive industrialization, dwindling resources, damaged ecosystems and exploited labor are also a determining factor for company to disclose ESG factors (Khan et al., 2021). The motives of legitimacy and accountability are created due to institutional pressures (Cormier, Magnan, & Van Velthoven, 2005; Waris, George, & Zeeshan, 2017). Pressure from a variety of stakeholders has prompted companies to integrate ESG practices into their operations. It is not surprising that various industrial sectors have adapted their activities and operations in line with the perspective of sustainability (Li, Pinto, & Diabat, 2020), including reporting ESG-related activities. Environmental activities (E) involve a company's efforts to positively impact the environment by complying with existing regulations and recognizing future impacts. Social activities (S) are the equitable treatment of relevant stakeholders and the protection of the social ecosystem in which the company operates. Governance (G) integrates corporate ethics and integrity, including principles like transparency and fair dealing, and the effective functioning of the board of directors (Limkriangkrai, Koh, & Durand, 2017, p. 461).

Indonesia presents an interesting case in which to explore the determinants of ESG disclosures. For some time, Indonesian companies have been confronted with a number of factors that expose them to ESG practices (Faisal et al., 2018). These are issues such as pollution, deforestation, social and political insecurity, and corruption (Djajadikerta & Trireksani, 2012). Despite these issues, since 2017, the Government of Indonesia has continuously committed to implementing ESG rules in investment and business practices such as the Government Regulation Number 47/2012 related to the obligation of companies to implement the corporate social responsibility; the Financial Services Authority (Financial Services Authority) rule Number 60 /POJK.04/2017 regarding the implementation of sustainability finance for financial services institutions.

This paper aims to test the relationship between types of industry and ESG disclosure. The industry sector plays a significant role by influencing ESG disclosure activities (Velte, 2017). However, the findings of prior studies are varied. For example, several findings suggest that the sensitivity of an industry has a positive effect on ESG disclosure (Garcia, Mendes-Da-Silva, & Orsato, 2017; Kuo & Chen, 2013). Other research has found that the manufacturing sector

¹ Environmental and social governance (ESG) terminology is used throughout this paper, including "corporate social environmental responsibility" and "sustainability."

discloses less environmental information (Cowen, Ferreri, & Parker, 1987). Baldini et al. (2018) argue that the analysis of factors affecting ESG disclosure practices should be limited in relation to certain types of industries. This variegation of findings means that study on the effects of the industry sector on ESG disclosure is still relevant (Gillan, Koch, & Starks, 2021). [In addition, various studies have been conducted related to ESG information disclosure practices, mainly in developed countries in continental Europe](#) (Buallay, 2019; Camilleri, 2015; Velte, 2016) and the US (Manita et al., 2018; Weston & Nnadi, 2021). Several studies have been conducted in developing countries in Latin American (Husted & Sousa-Filho, 2017; Lavin & Montecinos-Pearce, 2021), BRICS countries (Brazil, Russia, India, China, South Africa) (Garcia et al., 2017), Egypt (Aboud & Diab, 2018; Al Farooque et al., 2022), Tunisia (Khemir, Baccouche, & Ayadi, 2019), and Malaysia (Atan et al., 2018). [In Indonesia, however, research related to ESG disclosure practices remains very limited](#) (Purwantini et al., 2019). [Thus, current study would enrich the ESG disclosure literature; It is because that institutional backgrounds, such as voluntary or mandatory, may also produce different results than previous studies](#) (Khan, Bose, & Johns, 2019; Moonecapen, Abhayawansa, & Khan, 2022; Singhania & Saini, 2021).

Previous studies show that the level of ESG disclosure in Indonesia remains low (Hanifa & Cahaya, 2016) to moderate (Faisal et al., 2018; Trireksani & Djajadikerta, 2016). One reason for this is the low awareness of managers of companies in Indonesia about ESG issues (Gunawan, 2015). The awareness and involvement of chief executive officers (CEOs) is important. To release quality ESG information, companies require a competent CEO who has the knowledge, experience, skills, and professionalism to balance strategic and business decisions with the ESG issues facing a company (Lewis, Walls, & Dowell, 2014; Li et al., 2018). CEOs with greater power can enhance the value of a business by providing ESG information to key corporate stakeholders, such as investors (Li et al., 2018; Wukich, 2020). [Results from previous research still show inconsistency related to the CEO's role in enhancing ESG disclosure.](#) Duuren et al. (2016) argue that the CEO plays an important role in the investment process and risk control. [It is expected that CEO power may be an important factor that can moderate the relationship between industry type and ESG disclosure, thus provide a motivation for this study.](#) This is based on the conclusion of a previous study that a company's improved performance is not only due to ESG disclosure practices but can also be due to the influence of the greater power or authority of the CEO (Li et al., 2018). The results of this study may provide new insights into the role of CEO characteristics in the relationship between industry types and ESG disclosure for Indonesian companies.

Based on the explanations above, this study tests whether industry types and CEO power directly affect ESG disclosure and whether CEO power moderates the relationship between industry type and ESG disclosure using the legitimacy theory. Legitimacy theory has been used to explain the influence of company characteristics on ESG disclosure (Baldini et al., 2018; Branco & Rodrigues, 2008; Claasen & Roloff, 2012; Milne & Patten, 2002). ESG disclosure can be explained by the legitimacy theory as it becomes a strategy to protect the legitimacy of a company. ESG disclosure can overcome pressure from stakeholders who need such information (Baldini et al., 2018; Lokuwaduge & Heenetigala, 2016) and can also be used as an important tool for improving performance (Clarkson et al., 2008; Weber, 2013). However, practically, only a small part of the ESG issue can be described "materially" in order to create "relevant value" for each industry (Kotsantonis, Pinney, & Serafeim, 2016). Therefore, companies need to be encouraged to disclose ESG more fully and transparently (McBrayer, 2018). Gunawan (2015) shows that the main motivation of corporate social responsibility disclosure in Indonesia is to create a positive

image. Furthermore, her results indicate that companies still do not trust the benefits of disclosing social responsibility and are instead reluctant to provide information because it increases costs.

This study address the call of these studies by examining the effect of CEO power and industry type on the disclosure of ESG from the lens of legitimacy theory. This research contributes to the literature in the following ways. First, it enriches insights in the field of ESG disclosures in developing countries. Second, this study may provide additional evidence regarding the role of CEO power in enhancing the ESG disclosure.

The paper is structured as follows. The next section presents the literature review. Section 3 explains the research methods. Section 4 and 5 present the results and discussion. Finally, Section 6 presents the conclusion of the study.

2. LITERATURE REVIEW

Legitimacy theory may explain practices and strategies for disclosure of ESG factors (Garcia et al., 2017). Deegan and Gordon (1996) state that low investment in ESG factors has resulted in consistently low social and environmental disclosure. On the other hand, disclosure of ESG factors may be an effort on the part of firms to create a good reputation (Hasseldine, Salama, & Toms, 2005; Kuzey & Uyar, 2017). Managers play a significant role in the legitimization of corporations by managing the content of the information disclosed (Deegan & Gordon, 1996; Richardson & Welker, 2001). A number of studies on ESG factors have been conducted. This includes research on factors that determine the level of ESG disclosure—for example, studies on the determinants of ESG (Baldini et al., 2018; Rahman & Alsayegh, 2021), internal factors (Adams, 2002; Faisal & Achmad, 2014; Li et al., 2018) and the impact of ESG disclosure on financial performance (Garcia et al., 2017) and firm values (Clarkson et al., 2013; Li et al., 2018)—and research into why and how investors use ESG (Amel-Zadeh & Serafeim, 2018).

Industry variations have an effect on ESG disclosure levels (Gamerschlag, Möller, & Verbeeten, 2011; Kumar et al., 2021). Companies classified as being part of sensitive industries have better ESG indicators across all three dimensions of ESG. Companies classified as being part of sensitive industries achieve superior environmental performance compared to companies classified as being part of non-sensitive industries (Garcia et al., 2017). Richardson and Welker (2001) and Deegan and Gordon (1996) found that companies classified as being in sensitive industries express more consistent socio-environmental practices as a way of legitimizing their operations as the sector has a significant socio-environmental impact. The more sensitive the industry a company is in, the more the company will increase ESG disclosure in order to explain its social responsibility. However, Matakanye, van der Poll, and Muchara (2021) and Giovanna and Alfredo (2015) argue that there is no difference in the level of ESG disclosure between manufacturing and non-manufacturing family firms. In addition, non-family manufacturing firms are more active compared to non-manufacturing companies in terms of ESG disclosure. The higher disclosure level of non-family manufacturing firms may be caused by the impact of the manufacturing production process and the waste it produces to the surrounding environment.

According to the Bloomberg database, a company is classified into one of nine industrial sectors. Previous studies show that the disclosure of each sector may be varied. The manufacturing sector discloses the most, while the service/retail/food industry sector discloses the least. Gamerschlag et al. (2011) found that companies that produce consumer goods and energy providers engage in more social disclosure than other industrial sectors. Meanwhile, service sector companies such as insurance firms, software companies, and the technology industry tend to reveal

less ESG information. The issue of pressure on ESG disclosure arises in companies that have a variety of holdings that are owned partly by companies and partly by the government as compared to companies without government ownership. The government having a control function in a company encourages companies to conduct ESG disclosure more often and to be better over time (Baldini et al., 2018; Kotsantonis et al., 2016; Weber, 2013). According to legitimacy theory, companies in the consumer goods, energy, and mining sectors expose their public positions and strive to reduce political costs and external pressures through ESG disclosure. Increased disclosure is intended to legitimize companies' existence (Carels, Maroun, & Padia, 2013; Kumar et al., 2021). In sum, each type of industry has its own characteristics, resulting in different impacts from its operating activities (Faisal et al., 2022). Based on the explanation above, the greater the environmental and community impact, the greater the disclosure.

H1a: Industry type based on sensitivity level affects ESG disclosure.

H1b: Industry type based on business type affects ESG disclosure.

H1c: Industry type based on sector affects ESG disclosure.

H1d: Industry type based on the existence of government ownership affects ESG disclosure.

One of the internal factors that affects disclosure is support from top management. Adams (2002) argues that CEOs as decision makers play a significant role in driving ESG activities and disclosures. The power CEO is defined as the CEO's ability to overcome resistance and consistently influence key corporate decisions (Haleblian & Finkelstein, 1993). A powerful CEO has much control and influence over other managers and directors of the company's overall business management (Balderius, Melumad, & Meng, 2014). The powerful CEOs have stronger motivation to govern ESG disclosure practices to demonstrate their commitment to stakeholders' concerns (Duuren et al., 2016; Li et al., 2018). Lewis et al. (2014) suggest that CEO characteristics play an important role in mitigating external stakeholder pressures. For example, CEOs who have increased power and capacity will make better decisions to maintain organizational continuity (Pucheta-Martínez & Gallego-Álvarez, 2021). Furthermore, more experienced CEOs tend to have a better ability to understand a company's conditions, allowing them to reduce institutional pressures on stakeholders by disclosing ESG information (Lewis et al., 2014). Based on the prior studies, the higher CEO power the higher pressures to disclose the ESG information.

H₂: CEO power affects ESG disclosure.

Companies classified as being in sensitive industries have better levels of ESG disclosure than non-sensitive companies (Garcia et al., 2017). Giovanna and Alfredo (2015) found that the disclosure of manufacturing companies is higher than non-manufacturing companies. Carels et al. (2013) argue that mining companies outperform in communicating environmental issues compared to other sectors. The existence of government shares as a controller in the company shows a positive and significant influence on the level of disclosure of ESG information (Baldini et al., 2018; Kotsantonis et al., 2016; Weber, 2013). Higher levels of disclosure aim to create a good reputation (Hasseldine et al., 2005). The CEO plays an important role in disclosing such ESG information to manage impressions of stakeholders by directing the content of the information conveyed (Carels et al., 2013).

- H3a: CEOs' power moderates the relationship between industry type based on sensitivity and ESG disclosure.
- H3b: CEOs' power moderates the relationship between industry type based on business type and ESG disclosure.
- H3c: CEOs' power moderates the relationship between industry type based on sector and ESG disclosure.
- H3d: CEOs' power moderates the relationship between industry type based on the existence of government ownership and ESG disclosure.

3. RESEARCH METHODS

The research population is all 540 companies listed on the Indonesia Stock Exchange as of December 31, 2016. Of these 540 companies, 492 did not have complete data on ESG scores. Thus, the number of samples is 48 companies. Given that this study was carried out during the period 2012-2016, the total sample is 240. These 240 companies are categorized based on industry sector. Table 1 presents the measurement of variables. **The dependent variable is ESG scores.** The ESG scores are sourced from Bloomberg databases (Baldini et al., 2018; Fatemi et al., 2018; McBrayer, 2018). The ESG scores from the Bloomberg database are adjusted according to different industry sectors. This allows variations between industries for each industry to be minimized (Baldini et al., 2018). **The independent variable industry type.** The variable of industry type (J11) is measured with the dummy variables, taking a value of one if the firm is categorised sensitive and zero otherwise. The variable of industry type (J12) is measured with the dummy variables, taking a value of one if the firm is categorised non-manufacturing and zero otherwise. The variable of industry type (J14) is measured with the dummy variables, taking a value of one if the firm is categorised government ownership and zero otherwise. In study, the CEO power is acting as the moderating variable. The CEO power is measured by the tenure of a CEO (McBrayer, 2018). **This study uses three control variables, namely, profitability, leverage and size.** These control variables are measured by referring to previous studies (see Table 1). In this study, hypothesis testing uses the partial least squares (PLS) approach. PLS is a suitable method to test moderating effects when a feature is available to complement an indirect effect with various options. It also enables researchers to simultaneously test the relations between variables (Solovida & Latan, 2017). In contrast to other multivariate techniques, PLS is not dependent on the hypothesis of normality. However, assumptions such as multicollinearity and the quality of the fit indices need to be taken into account in the evaluation of the local model (Latan et al., 2018). **The statistical model is presented as follows:**

$$ESG = \beta_0 + \beta_1J11 + \beta_2J12 + \beta_3J13 + \beta_4J14 + \beta_5CEO + \beta_6J11*CEO + \beta_7J12*CEO + \beta_8J13*CEO + \beta_9J14*CEO + \beta_{10}Pr + \beta_{11}Le + \beta_{12}Sz + \varepsilon$$

Table 1. Variable measurement

Variable	Measurement	Source
ESG	Bloomberg ESG score	Baldini et al. (2018)

Variable	Measurement	Source
CEO power	Tenure of CEO	McBrayer (2018)
Industry type (JI1)	0 = non-sensitive 1 = sensitive	Faisal et al. (2018)
Industry type (JI2)	0 = manufacturing 1 = non-manufacturing	Weber (2013)
Industry type (JI3)	1 = agriculture (plantation) 2 = basic industry and chemicals 3 = customer goods 4 = infrastructure utility and transportation 5 = mining 6 = miscellaneous 7 = finance 8 = property real estate and building construction 9 = trade services and investment.	Weber (2013)
Industry type (JI4)	0 = non-government ownership 1 = government ownership	Weber (2013)
Profitability	ROA = Net income divided by total assets	Faisal et al. (2018)
Leverage	Total liability divided by total assets	Faisal et al. (2018)
Firm size	LnTotal assets	Faisal et al. (2018)

4. RESULTS

Table 2 presents the descriptive statistics of the variables. For five consecutive years (2012-2016), the number of companies that disclosed environmental information was 13 (65 observations); social information was 17 (85 observations); governance information was 42 (210 observations); ESG information was 48 (240 observations). In terms of the level of disclosure per year, this study found that the mean (median) disclosure of ESG information was as follows: 16.07 (10.19); 17.22 (11.16); 18.08 (11.16); 19.15 (11.16); 20.36 (11.32). In general, the mean of ESG disclosure indicates a positive trend from year to year. The results also indicate that the contents of ESG disclosure are varied, with governance being the most-disclosed item, followed by social issues and environmental-related information as the least disclosed by companies in Indonesia. The variation of disclosure may indicate a lack of uniformity of ESG reporting standards (Lokuwaduge & Heenetigala, 2016). The mean (median) of CEO tenure showed that the median tenure of CEOs is 5.06 (4.00) years. These results indicate that a CEO's tenure is relatively short. For control variables, the descriptive statistics show that on average, a sample company has a relatively low level of profitability, high leverage, and relatively small size.

Table 2. Descriptive statistics

Variable	Year	n	Mean	Median	Std. deviation	Minimum	Maximum
ESG	2012	48	16.07	10.19	11.61	5.79	48.76

Variable	Year	n	Mean	Median	Std. deviation	Minimum	Maximum
Environmental (%)	2013	48	17.22	11.16	11.77	6.61	52.89
	2014	48	18.08	11.16	12.28	6.61	51.65
	2015	48	19.15	11.16	13.10	6.61	54.13
	2016	48	20.36	11.32	13.32	6.61	51.65
	Total	240	18.18	11.16	12.42	5.79	54.13
	2012	13	19.39	14.73	14.32	2.33	46.51
	2013	13	18.41	12.40	14.46	2.33	51.94
	2014	13	18.89	14.73	14.73	2.33	55.81
	2015	13	21.75	14.73	14.71	6.98	55.81
	2016	13	20.91	14.73	14.28	6.20	54.26
Social (%)	Total	65	19.87	14.73	14.10	2.33	55.81
	2012	17	28.67	22.81	14.73	7.02	49.12
	2013	17	29.62	22.81	14.12	7.02	52.63
	2014	17	31.68	22.07	15.06	7.02	52.63
	2015	17	32.44	32.23	12.95	7.02	54.39
	2016	17	32.51	33.33	13.48	7.02	54.39
	Total	85	30.98	28.07	13.84	7.02	54.39
Governance (%)	2012	42	40.66	42.86	13.01	8.68	75.00
	2013	42	42.50	42.86	12.83	9.92	69.64
	2014	42	42.96	42.86	12.69	9.92	67.86
	2015	42	42.63	42.86	12.68	9.92	67.86
	2016	42	43.22	42.86	12.53	9.92	67.86
	Total	210	42.39	42.86	12.66	8.68	75.00
CEO power (year)	2012	48	4.53	3.54	3.55	.42	17.50
	2013	48	5.11	3.54	3.81	.58	18.50
	2014	48	5.22	4.64	3.90	.25	19.50
	2015	48	5.16	4.00	4.21	.67	20.50
	2016	48	5.27	4.00	4.32	.25	21.50
	Total	240	5.06	4.00	3.94	.25	21.50
Profitability (%)	2012	48	11.39	8.12	11.97	-16.43	43.08
	2013	48	7.42	5.48	9.37	-23.53	43.36
	2014	48	6.44	4.22	8.55	-10.14	43.93
	2015	48	3.29	3.06	8.74	-22.73	39.00
	2016	48	4.55	3.31	7.73	-17.15	39.36
	Total	240	6.62	4.73	9.72	-23.53	43.93
Leverage (%)	2012	48	6.03	.55	11.18	.02	54.99
	2013	48	7.60	.50	14.25	.00	56.91
	2014	48	8.71	.54	14.33	.02	49.83
	2015	48	9.33	.50	17.41	.03	79.14
	2016	48	9.36	.44	17.24	.00	75.76

Variable	Year	n	Mean	Median	Std. deviation	Minimum	Maximum
	Total	240	8.21	.50	14.98	.00	79.14
Firm size (Ln)	2012	48	4.11	4.16	.77	1.64	5.80
	2013	48	4.17	4.17	.75	1.56	5.87
	2014	48	4.23	4.22	.77	1.53	5.93
	2015	48	4.27	4.24	.76	1.58	5.96
	2016	48	4.29	4.30	.77	1.64	6.02
	Total	240	4.22	4.22	.76	1.53	6.02

Table 3 shows the correlations matrix between industry type variables (JI1, JI2, JI3, and JI4), CEO power (CEO), profitability, leverage, firm size, ESG disclosure, and each dimension of ESG. Table 3 shows that all industry group variables have a positive and significant correlation at the significant level of 1%, except for industry types based on business sectors, which have negative correlations with ESG disclosure. CEO power is negatively correlated and significant at the level of 1% with ESG, social, and environmental. For variable control, leverage and firm size have correlations with ESG disclosure at the significant levels of 1% and 5%. Overall, these results are in line with predictions that industry types and CEO power have a positive correlation with ESG.

Table 3. Correlation matrix

Variable	ESG	Governance	Social	Environmental
JI1	0.375***	0.431***	0.399***	0.56***
JI2	0.159**	0.318***	0.120	0.199
JI3	-0.275***	-0.247***	0.176	-0.009
JI4	0.414***	-0.217***	0.597***	0.193
CEO power	-0.202***	-0.014	-0.244**	-0.322***
Profitability	0.109*	0.095	0.174	-0.089
Leverage	-0.301***	-0.421***	-0.207*	-0.197
Firm size	0.147**	-0.209***	-0.264**	-0.254**
Observation	240	210	85	65

Notes: JI1 = industry type 1 (sensitive, non-sensitive); JI2 = industry type 2 (manufacturing, non-manufacturing); JI3 = industry type 3 (sector 1-9); JI4 = industry type 4 (government ownership, non-government ownership).

Significance at the *10%, ** 5%, and ***1% levels, respectively

Table 4 shows the test results of the path analysis regarding the direct effect of industry types (JI1, JI2, JI3, and JI4) on ESG disclosure (ESG), as well as the interaction effect of CEO power and industry types (CEO*JI1, CEO*JI2, CEO*JI3, and CEO*JI4) on ESG disclosure (ESG). The results of direct effects tests show that JI1 had a positive effect on ESG (0.299, p value = 0.001), governance (0.293, p value = 0.001), and environmental (0.947, p value = 0.01) dimensions. JI4 had a positive effect only on ESG (0.261, p value = 0.05) and the social dimension (0.500, p value = 0.01). These findings are consistent with the correlation test results. The results also show that interactions between JI1 and CEO power were positive and significant both on ESG (0.211, p

value < 0.05) and governance (0.293, p value = 0.01) dimensions. For control variables, only leverage (-0.139, p value = 0.05) and firm size (0.184, p value = 0.05) had a significant influence on ESG.

Table 4. Results of structural path

Variable	ESG	Governance	Social	Environmental
J11	0.299***	0.293***	-0.097	0.947***
J12	-0.091	-0.230	-0.013	-1.073
J13	-0.115	0.018	0.154	0.074
J14	0.261**	-0.179**	0.5***	-0.47**
CEO power	-0.130*	0.108	-0.278	-0.064
CEO*J11	0.211**	0.293***	-0.433	-0.058
CEO*J12	-0.224*	-0.193	0.059	-0.150
CEO*J13	0.322	0.157	0.204	0.025
CEO*J14	0.011	-0.058	-0.219	-0.071
Profitability	0.188*	0.057	0.089	0.114
Leverage	-0.139**	-0.526***	-0.024	0.301
Firm size	0.184**	0.061	-0.181	-0.840
Obs	240	210	85	65
R ² (ARS)	0.555	0.415	0.535	0.519
APC	0.18	0.17	0.188	0.349
AVIF	3.214	3.393	5.202	7.865
Q square	0.393	0.377	0.617	0.69

Notes: J11 = industry type 1 (sensitive, non-sensitive); J12 = industry type 2 (manufacturing, non-manufacturing); J13 = industry type 3 (sector 1-9); J14 = industry type 4 (government ownership, non-government ownership); APC = *average path coefficient*; ARS = *average R squared*; AVIF = *average block VIF = acceptable if <=5, ideally <=3.3*

Significance at the *10%, ** 5%, and ***1% levels, respectively

5. DISCUSSION

Based on the results of the Table 4, several conclusions can be drawn. First, the hypotheses H1a and H1d are supported. There is a positive relationship between industry type based on sensitivity (sensitive and non-sensitive), government ownership (government and non-government), and ESG disclosure. These results are in line with the findings of previous studies (e.g. Deegan & Gordon, 1996; Faisal et al., 2018; Reverte, 2008). The findings suggest that corporate ownership by the government has a greater influence on the level of ESG disclosure non-government ownership (e.g. Baldini et al., 2018; Kotsantonis et al., 2016; Weber, 2013). Government ownership in companies that simultaneously act as regulators can perform control functions and force companies to increase ESG disclosure. The government's presence in a company plays a significant role in increasing ESG disclosures. The presence of the government motivates companies to comply with regulations related to social and environmental responsibility to improve the company image. This finding may indicate that ESG disclosure becomes a strategy for legitimizing the negative environmental impact of a company's activities. By enhancing ESG

information, companies can demonstrate their commitment to and concern for the environment and society. In this way, stakeholders will have the impression that the company's actions are in line with the company's goals. This will improve the company's image and reputation from the perspective of stakeholders.

Second, H1b and H1c are rejected. This study fails to demonstrate that companies in industries grouped into manufacturing and non-manufacturing sectors have a significant influence on ESG disclosure. This differs from prior studies (Kuzey & Uyar, 2017; Reverte, 2008). The finding suggests that companies in industries whose manufacturing processes have a negative impact on the environment do not provide more information, nor do they report more information than companies in other industries. Another possibility is that firms in manufacturing industries experience less pressure from stakeholders over their environmental performance, so the motivation for doing so leads to a lower level of ESG disclosure. In addition, companies in the consumer goods sector and other service sectors do not feel high pressure from external stakeholders regarding the impact of their operational activities on the environment. That is, they have low political costs. Manufacturing companies, for instance, feel more pressure from internal stakeholders, such as employees. In their view, it is the pressure of employees that needs to be more tended to than the environment.

Third, H2 is rejected. The findings suggest that CEO power negatively influences ESG disclosures. The result is inconsistent with Li et al. (2018). The lack of influence of CEO permanence on the disclosure of ESG factors is probably due to the brevity of CEO factors in the company. Descriptive statistics for CEO tenure indicate that the average tenure of a CEO of a company is four to five years. Therefore, the direct influence of CEO power is not sufficiently influential to increase disclosure. These findings indicate that the short tenures of CEOs are unable to demonstrate their commitment to disclosing more ESG information as a means of addressing stakeholder demands. New CEOs are less likely to seek requests for voluntary disclosure than long-term CEOs. This is explained by the fact that they do not yet have a strong organizational culture or do not fully understand how to reduce stakeholder pressure on risk.

Fourth, H3a is supported. The results suggest that the interaction of CEO power and sensitive industries increases the level of ESG disclosure. This finding is consistent with Li et al. (2018). The presence of a CEO reinforces the influence of industry sensitivity on ESG disclosure. Industries that fall into the environmentally sensitive category tend to disclose environmental problems because they have the potential to harm the environment and are therefore vulnerable to more stringent regulations. To reduce the pressure exerted by these regulators, experienced CEOs can encourage businesses to become more involved in ESG activities.

Fifth, hypotheses H3b, H3c, and H3d are rejected. These results indicate that CEO characteristic factors such as tenure do not fully moderate the relationship between industry types and ESG disclosures. The influence of the increased power or authority of a CEO has not been a decisive factor in enhancing disclosure. These results are different from the findings of Li et al. (2018).

6. CONCLUSION

This study investigates the influence of different types of industries (sensitivity levels, business types, industry sectors, and government ownership) on ESG disclosure. It also examines the moderating role of CEO power in the relationship between industry types and ESG disclosure. The results of this study demonstrate that industry grouping may have differing influences on ESG

disclosure. Companies within environmentally sensitive industries and those owned by the government disclose more ESG information than non-sensitive/non-government-owned companies. These findings suggest that Indonesian companies that disclose ESG information remain motivated by legitimate factors. However, our research does not provide evidence that the classification of industries by type of business (manufacturing or non-manufacturing) or sectors (nine sectors) are determinants of ESG disclosure. The study also found that CEOs can boost sensitive industries to release more ESG information.

There are several implications to this study. First, the effects of industry classification have a major influence on the levels of disclosure of ESG factors. Differences in the classification of industries may have important management consequences. Indeed, the classification of industries may influence the behavior of CEOs from different industrial sectors. This classification may create an environment to deal with stakeholder pressures or vice versa. Industries that are sensitive and engage in activities that have negative connotations use the disclosure of ESG factors to change stakeholder perceptions by using legitimacy strategies. In this respect, the study contributes to the existing ESG literature by linking industry type and CEO power to ESG disclosure levels. These findings suggest that companies can disclose information to address public concerns and legitimize their operations when activities may or may not meet public expectations. Cuganesan, Guthrie, and Ward (2010) argue that voluntary disclosure of public information becomes more symbolic when the activities of a company have a greater social and environmental impact.

Second, these findings highlight a need for companies to consider the power of CEOs to encourage more ESG reporting. CEOs with significant power can encourage disclosure policies or greater transparency of information. Consequently, the considerable power of a CEO can strengthen the relationship between industry type and the disclosure of ESG factors. The managerial implications of this study are that in an effort to maintain legitimacy, companies require the involvement and commitment of CEOs with greater power.

This research has some limitations. First, the study measures disclosure of ESG factors only in terms of their extent. Second, we studied industry type as classified into only four groups. Therefore, there is a risk of bias when we combine those industries. Third, this study covers only one developing country, Indonesia. Future studies could use the approaches developed in this study to classify industries using different methods and evaluate their effect on levels of ESG disclosure. Further analysis is also needed to provide a detailed overview and disclosure of ESG factors in terms of quantity and quality. Finally, future studies may consider conducting cross-national research to enrich these findings with data from other developing countries with a broader geographic reach, such as Asian countries in general.

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