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The Influence of Board of Directors and Ownership Structure on Integrated Reporting and the Moderating Role of ESG Disclosure: A Proposed Conceptual Framework

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Abstract
Integrated Reporting (IR) is the current novelty of corporate reporting around the world, which requires more future research, particularly on a voluntary basis and in developing countries such as Malaysia. Practice 11.2 of Malaysian Code of Corporate Governance (MCCG) 2017 was introduced in April 2017 encourages large companies to adopt IR. This shows that Malaysia is an appropriate emerging country to examine the IR practices. By combining the legitimacy theory and the agency theory, this study examines the influence of the board of directors (BOD) and ownership structures on IR disclosure level, and further explores the moderating effect of environmental, social, and governance (ESG) disclosure on this relationship among Malaysian listed companies. The proposed framework could assist listed companies that disclose their ESG practices to increase the IR disclosure level to create value, and enhance transparency and accountability. This study contributes to the IR practices, their determinants, and the reporting development in Malaysia.
Keywords: Integrated Reporting, Board of Directors, Ownership Structure, Environmental, Social, and Governance, Malaysia

Introduction

The external business environment has turned into more complex, and traditional corporate reporting seems unable to face this complexity to assist stakeholders (Hamad et al., 2020). The Covid-19 pandemic is the latest complex business environment that has affected businesses globally and led to an increase of corporate disclosures by many companies to assist stakeholders in view on the company's value creation comprehensively and consequences faced beyond the companies (Lok & Phua, 2021). Unfortunately, traditional corporate reporting such as financial reporting failed in disclose adequate information required by all the stakeholders (Bernardi & Stark, 2016). Besides, most companies seemed unable to produce both financial and non-financial in an integrated way through Corporate Social Responsibility (CSR) and Sustainability Reporting (SR) (Lok & Phua, 2021). In this light, integrated reporting (IR) has been identified as the key approach in the context of disclosure (García-Sánchez et al., 2020; Lok & Phua, 2021) as it has been adopted in over 70 countries (IIRC, 2020). In Malaysia, the survey findings by Malaysian Institute of Accountants [MIA] and Associations of Chartered Certified Accountants [ACCA] (2016) shows that many corporate report preparers and users are dissatisfied with the adequacy of the current approaches in give real insights into company performance and value creation potential, thus, require improvement in existing corporate reporting in Malaysia. Recently, Practice 11.2 of MCCG 2017 was introduced, encouraging large companies to adopt IR in accordance with a globally recognized framework (SCM, 2017). However, this has resulted in gap practices among the listed companies, in which from 2018 to 2020, only 57% of companies consistently adopted IR (SCM, 2022). Besides, the degree of regulation is still unclear due to none of the countries have introduced IR on a mandatory basis amongst the emerging countries (Suttipun & Bomlai, 2019), including Malaysia, which possibly has led to the low IR disclosure among the listed companies (SCM 2019). A lower IR disclosure might unable to assist companies to attract more foreign investment and boost company performance (MIA & ACCA, 2016) particularly, in a post-Covid time.

In addition, the issues of accounting scandals which reflect the limitations of global governance and disclosure regulations, the economic crisis, the confidence issue of investors in corporate disclosure systems and the relevance of traditional financial reporting has raised the issue of corporate governance (CG) and sustainability (Zouari & Dhifi, 2021). In this regard, the disclosure of IR might be the key approach. Particularly, CG is considered one of the main determinants towards the disclosure strategy of companies, especially the IR (De Villiers et al., 2017; Velte, 2021; Velte & Stawinoga, 2017). Meanwhile, environmental, social, and governance (ESG) is one of the sustainability initiatives (Ismail et al., 2019) and seems to be linked to and influences significant corporate decisions (Brooks & Oikonomou, 2018), such as IR disclosure. However, in Malaysia, the issues of low IR disclosure are perhaps due to the lack of support by BOD as reported in the survey findings by the MIA and ACCA (2016), which highlighted that 68.7% of corporate preparers disclose IR has not been deliberated at the board level and the participants of the survey require board level commitment. Besides, there is a large proportion of family ownership among listed Malaysian companies (Wan Mohammad & Wasiuzzaman, 2020) and these types of companies are negatively related to the level of voluntary disclosure, including the IR (Suttipun & Bomlai, 2019). Meanwhile, a set of voluntary disclosure frameworks such as International Integrated Reporting Framework (IIRF) is required by these types of companies to enhance transparency and CG (Zaini et al., 2019). Therefore, this study aims to extend previous works by examining both internal and external CG mechanisms, which are board of directors (BOD) and ownership structure.

In view of the corporate reporting trend, stakeholders are demanded for more information related to ESG (Lok & Phua, 2021). For instance, ESG companies are often pressured by investors and analysts to disclose IR (Chouaibi et al., 2020). Therefore, this article aims to investigate the influence of BOD and ownership structures on IR disclosure level, and further explores the moderating effect of ESG disclosure on this relationship among Malaysian listed companies

Based on the previous literature, there are a few research gaps that motivate this study to add contribution to IR literature. First, the empirical studies that investigate the association between the BOD and ownership structure on IR, however, show inconsistent results (Omran et al., 2021; Vitolla et al., 2020; Suttipun and Bomlai, 2019; Tiron-Tudor et al., 2020; Zouari and Dhifi, 2021). In addition, there is a lack of empirical studies on IR among the listed companies in Malaysia, in particular on the disclosure level and its determinants (Hamad et al., 2020). This is due to the fact that there have been minimal IR studies conducted in the context of voluntary basis in developing countries Velte (2021), including Malaysia Jamal & Ghani (2016), which is particularly significant to better understand the IR practice as the value potential of IR being limited on a mandatory basis only (Wahl et al., 2020). Furthermore, the majority of the previous studies examined the relationship between CG mechanisms and IR from the aspect of the BOD Omran et al (2021); Songini et al (2021); Zouari & Dhifi (2021), and there was a limited number of studies that examine both BOD and ownership structure. Therefore, this study contributes with the additional elements which are the ownership structure as recommended by Hamad et al (2020); Velte (2021); Zouari and Dhiffi (2021) as well as the level of director education to measure the board diversity as suggested by Songini et al (2021) to understand better the relationship between BOD and ownership structure on IR disclosure level. Meanwhile, Velte (2021) highlights that those previous reviews have not placed enough emphasis on moderator and mediator analysis in IR studies, such as only three researches included moderating and mediating variables to investigate IR (Nwachukwu, 2021). Thus, this study included the moderator variables to understand better the relationship between BOD and ownership structure on IR disclosure level. Finally, numerous past studies focused more on the variables that influence IR adoption, even though the literature expands on the determinants of IR disclosure level. Unfortunately, the issue with investigating purely on IR adoption is that it does not show the extent to which the companies implemented the IR principles Wahl et al (2020) it is not sufficient (Velte, 2021).

Taking into account the research dearth on this topic, this article aims to achieve the following objectives: (1) to investigate the influence of the board of directors on the IR disclosure level among listed companies in Malaysia; (2) to examine the influence of ownership structure on the IR disclosure level among listed companies in Malaysia; (3) to investigate the moderating effect of ESG disclosure on the influence of board of directors and ownership structure on the IR disclosure level. Whereas to address this objective, this study deals with the following three sections: the first section presents the most relevant literature. The second one provides the description of theoretical framework and hypothesis development. Finally, the last sections provided the conclusions and directions for future research.

Literature Review

IR is the current novelty of corporate reporting and an extension to traditional annual reports that describe the capacity of companies to create value over time Chouaibi et al (2020), which was introduced by the International Integrated Reporting Council (IIRC) in 2013. IR is identified as a futuristic reporting model by a few as it can improve corporate's reporting quality Oktorina et al (2021) through providing superior information as the integrated report is anticipated to provide more meaningful and concise information (Adhariani & Sciulli, 2020). Aside from general studies, the researcher identifies two streams of in-depth IR analysis in the context of this study. The first stream focuses on the determinants of IR disclosure level, in which De Villiers et al (2017); Velte (2021); Velte and Stawinoga (2017) highlight that CG is one of the dominant determinants of IR. The second stream highlights the factors affecting the determinants of IR disclosure due to Velte (2021) calls for more future studies to focus on moderator and mediating analysis of the IR studies.

In terms of the first stream, previous literature highlights that further research on the determinants of IR is needed (Hamad et al., 2020; Zouari & Dhifi, 2021). In this regard, some studies have been devoted to describing the influence of BOD on IR. Indeed, Zouari and Dhifi (2021) indicate that there is a relationship between board size, independence, and duality on IR. Omran et al (2021) found evidence that the aggregate IR index is influenced by board independence, firm size, profitability, and growth opportunities. Finally, Tiron-Tudor (2020) found that IR disclosure alignment level to the IIRF is related to the proportion of outside directors, longer board tenure, and two-tier or mixed boards.

Furthermore, the literature stresses a strong influence of ownership structure, as an external corporate governance mechanism, on IR activities (Raimo et al., 2020). Past literature has highlighted the correlation between ownership structure and corporate disclosure such as Alhazaimeh et al (2014) found that foreign ownership and block holder ownership significantly influences voluntary disclosure. Nonetheless, there is very limited research that analyzes the influence of ownership structure on IR, which motivates this study to fill this gap. To the best of the researcher's knowledge, only a few studies included the ownership variables in their IR studies, such as Chanatup et al (2020); Vitolla, et al (2020), and Suttipun and Bomlai (2019) found that institutional ownership has a positive effect on IR. Meanwhile, Chanatup et al (2020) found a positive effect of insider ownership and ownership concentration on IR.

Finally, there is a research dearth on the moderating effect, which motivates the inclusion of such analysis in this study. In this regard, Hamad et al (2020) highlight that the BOD could influence the IR disclosures better in the companies with higher Sustainability Reporting (SR). In this light, ESG is one of the initiatives under sustainability. Besides, based on previous literature, there are few studies that examine the moderator role of ESG, such as Chairani and Siregar (2021); Nirino et al (2021); Shakil (2021); Shakil et al (2020); Stellner et al (2015) which encourage this study to further examine the moderator role ESG disclosure in the context of BOD and ownership structure on IR.

Theory and Hypothesis Development

Theoretical and Conceptual Framework

This study integrates the legitimacy theory and agency theory to create the research structure, with the addition of new determinants to further explain the IR disclosure level. The integration of the legitimacy and agency theory is consistent with previous research such as Chouaibi et al (2020); Suttipun and Bomlai (2019), particularly in examining the relationship between BOD and ownership structure on IR. According to legitimacy theory, entities disclose IR to pursue legitimacy (De Villiers et al., 2017). This theory further argues that companies disclose their ESG practices on a voluntary basis to inform that they are complying with the norms and expectations of society (Alsayegh et al., 2020). In respect of the role of ESG disclosure on BOD and ownership structure, legitimacy theory argues that companies change their reporting strategy to increase the usefulness of their decision in the fulfillment of stakeholders' information needs (Velte, 2021). In this regard, the board is involved in the decision-making process of a company, and they play an important role in determining a company's disclosure practices (Hamad et al., 2020). Whereas the characteristics of ownership structure are assumed significant as several types of a shareholder may possess the knowledge necessary to monitor the disclosure practices of a company (Donnelly & Mulcahy, 2008) in which they may take into account the ESG practices of a firm due to ESG may lead to a higher shareholder's return (Mohammad & Wasiuzzaman, 2021).

Meanwhile, according to agency theory, the board is a useful control mechanism for aligning the interests of ownership and management both in relation to financial and non-financial information (Jensen & Meckling, 1976) including through IR. Besides, to limit the agency's problems, corporate executives are influenced by board characteristics to strengthen disclosure practices (Chouaibi et al., 2020). Whereas the literature recommends that shareholders can carry out another form of monitoring as some types of shareholders may own the skills, knowledge, and motivation to prevent the concealment of information and, thus, enhance the level and quality of disclosure (Donnelly & Mulcahy, 2008). Thus, this theory shows the influence of BOD and ownership structure on the IR disclosure level.

Based on the above consideration, this study develops a proposed conceptual framework to explain the influence of BOD and ownership structure on IR disclosure level, and further explores the moderating effect ESG disclosure. It incorporates three main variables: (1) the independent variable are BOD and ownership structure; (2) the dependent variable is IR disclosure level; (3) ESG disclosure is the moderator variable as shown in Figure 1. This study argues that BOD and ownership structure influences the IR disclosure level and this relationship could be stronger in firms with higher ESG disclosure.

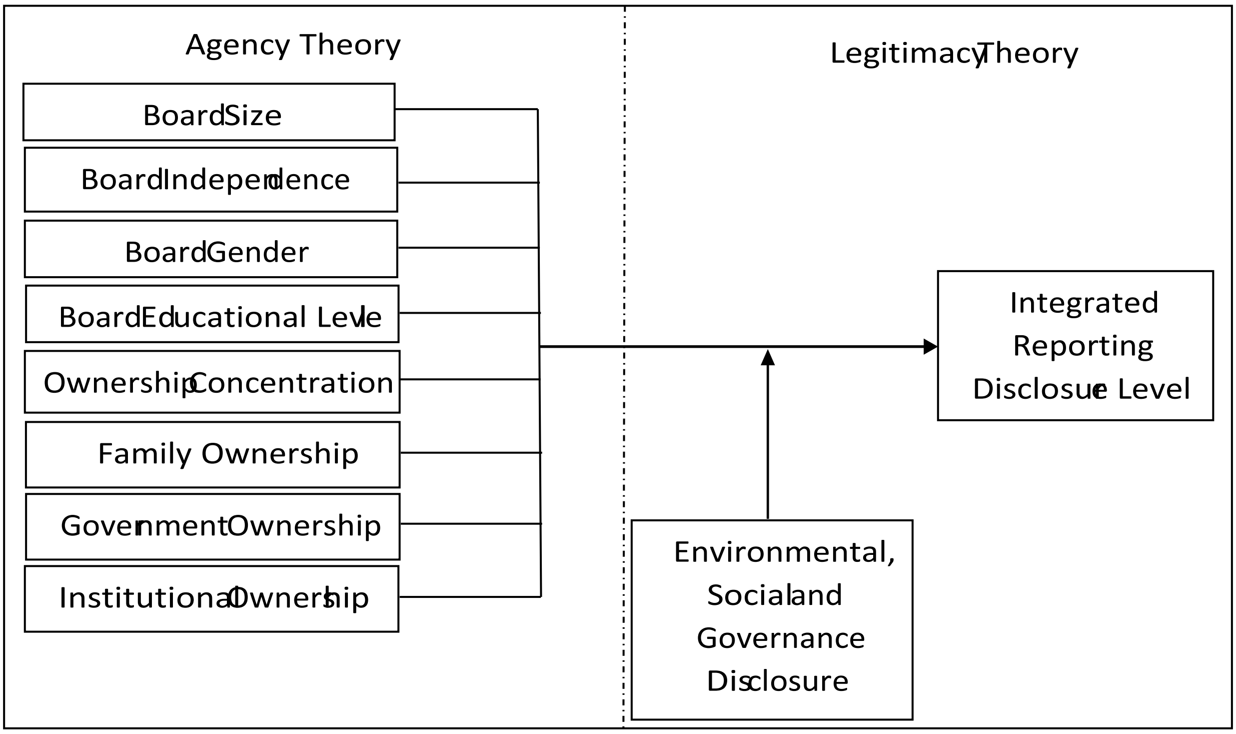

Figure 1: Proposed Theoretical and Conceptual Framework

Hypothesis Development

Board Size and Integrated Reporting Disclosure Level

Board size can be defined as "the number of board members" (Levrau & Berghe, 2007). Previous literature shows that many suggest the advantages of having a larger board size, such as it will lead to a large volume of information published (Akhtaruddin et al., 2009). A larger board would tend to have reduced information asymmetry by publishing more societal information (Meniaoui et al., 2016). Besides, a larger board will increase the directors' ability to promote valuecreating activities and collective expertise and experience (Akhtaruddin et al., 2009), including providing diversity in terms of financial expertise (Chouaibi et al., 2020). From another point of view, past literature studies highlight that smaller boards could be more effective than larger boards (Coles et al., 2008) in mitigating agency conflicts (Chouaibi et al., 2020). Besides, small boards are more effective at monitoring than larger boards because larger boards may have difficulties in obtaining consensus in an agreement, in particular on the identification of relevant issues, thus may lead to poorer materiality disclosure (Fasan & Mio, 2016).

The empirical evidence provided by previous literature is rather mixed, and as such, this study may shed additional light on the relationship between board size and IR. Adhikariparajuli et al (2021); Chanatup et al (2020); Hurghis (2017); Suttipun and Bomlai (2019) found a positive relationship between board size and IR disclosure level, while Zouari and Dhifi (2021) found a negative relationship between the two variables. Meanwhile, Falatifah and Hermawan (2021); Omran et al (2021); Tiron-Tudor et al (2020) found no relationship between board size and IR disclosure level. Thus, this study proposes the following hypothesis

H1: There is a positive relationship between board size and IR disclosure level

Board Independence and Integrated Reporting Disclosure Level

Board independence reflects "the extent to which the board is independent of the management of the company" (Liao et al., 2018). Independent directors play a significant role in constraining the information asymmetry problem and improving the quality of IR (Chouaibi et al., 2020). Agency theory proposes that a higher percentage of independent directors increases the board's effectiveness (Amran & Manaf, 2014) due to the fact that they are able to mitigate agency conflicts with managers in the absence of information asymmetries (Kachouri & Jarboui, 2017). Thus, the higher the number of independent directors on boards, the higher the disclosure level (Haniffa & Cooke, 2005). However, while most companies have a majority of independent directors on board, it is difficult to determine whether they are truly independent (Barako, 2007), and, thus, may influence reporting practices (Omran et al., 2021). Besides, blockholders may select independent directors to represent their interests and obtain the required information directly from the directors they elect instead of from public disclosures (Eng & Mak, 2003).

The empirical evidence provided by previous literature is mixed, which motivates this study to examine the relationship between board independence and IR. Chanatup et al (2020); Omran et al (2021); Tiron-Tudor et al (2020); Zouari and Dhifi (2021) found a positive relationship between board independence and IR disclosure level, while Suttipun and Bomlai (2019) found a negative relationship between the two variables. Whereas, Falatifah and Hermawan (2021); Hurghis (2017) found that there was no relationship between board independence and IR disclosure level. Thus, this study recommends the following hypothesis

H2: There is a positive relationship between board independence and IR disclosure level

Board Gender and Integrated Reporting Disclosure Level

Board diversity can be defined as the "disparity between the directors" (Robinson & Dechant, 1997). Following Songini et al (2021), this study will measure board diversity based on the gender and education level of the board, which supports the concept that "diversity in the board is more pertinent than the diversity of the board." Various studies have considered gender diversity as one of the key variables of board characteristics (Prado-Lorenzo & Garcia-Sanchez, 2010; Songini et al., 2021) which is often argued to have a positive effect on the quality of strategy decisions (Chouaibi et al., 2020). Agency theory suggests that female directors are likely to act against male directors' tendency to withhold information and secrecy, thus providing strong monitoring (Ahmed et al., 2017; Omran et al., 2021). Gender diversity is associated with significant disclosure improvement (Gerwanski et al., 2019) and, in particular, is among the most important factors in the integrated dissemination of information (Frias-Aceituno et al., 2012). In addition, increasing board gender diversity may result in a better assessment of the needs of diverse stakeholders (Fiori et al., 2016).

The empirical evidence provided by previous literature is rather mixed, which motivates this study to examine the influence of board gender diversity on IR disclosure level. For example, Chanatup et al (2020) found a positive relationship between board gender diversity and IRDL, while Songini et al (2021) found a negative relationship between board gender diversity and IR quality. Meanwhile, Omran et al (2021); Tiron-Tudor et al (2020) found there was no relationship between board gender diversity and IR disclosure level. Thus, this study offers the following hypothesis:

H3: There is a positive relationship between board gender and IR disclosure level

Board Education Level and Integrated Reporting Disclosure Level

Diversity in the education, professional background, and previous experience of board members have to be considered, in particular, their educational background contributes to defining their skills and knowledge (Songini et al., 2021). Vitolla et al (2020) suggest that future studies could investigate the influence of other board attributes, such as the educational background. According to Åberg and Torchia (2020), board diversity in terms of education level has a notable influence on dynamic managerial capabilities and strategic change such as driving the corporate disclosure decision by a company.

There is limited empirical evidence provided by previous literature which examines the relationship between board education level and IR, which motivates this study to include this to measure board diversity. For instance, Songini et al (2021) found a positive relationship between board education level and IR quality. Thus, this suggests the following hypothesis

H4: There is a positive relationship between board education level and IR disclosure level

Ownership Concentration and Integrated Reporting Disclosure Level

A widely held company means having a large number of shareholders, each holding a small portion of the shares of companies and not concentrated in the hands of a few large shareholders (Ghazali, 2007). In this regard, the issue of public accountability may become more significant and, thus, may require additional participation in social activities as well as the disclosure of these activities in a widely held company (Ghazali, 2007). According to Raimo et al (2020), higher agency conflicts lead to the need to show the manager's commitment in favor of ownership and to mitigate the strong pressures which could push widely held company structure to provide higher quality information within the integrated reports. On the contrary, the lower pressures and the lower agency conflicts that distinguish companies with higher ownership concentration could result in the issuance of lower quality information within the integrated reports.

The empirical evidence provided by previous literature on the relationship between ownership concentration and IR is very limited such as Raimo et al (2020) found a negative relationship between the two variables, whereas Ghazali (2007) found that ownership concentration is not statistically significant in explaining the CSR disclosure level. Hence, this study motivates to investigate the relationship between these variables and proposes the following hypothesis

H5: There is a negative relationship between ownership concentration and IR disclosure level

Family Ownership and Integrated Reporting Disclosure Level

Family ownership structure can be seen in situation where the major shareholder and the top management may be either the same person or people from the same family (Suttipun & Bomlai, 2019). The percentage of family member representation might have an influence on the disclosure practice (Haniffa & Cooke, 2002). Haji and Ghazali (2013) found that companies with a higher proportion of family members on the board would provide less voluntary information disclosure. Thus, it may be expected that companies with a family ownership structure are negatively associated with the level of voluntary reporting disclosure, including the IR (Suttipun & Bomlai, 2019). In contrast, Chau and Gray (2010) show that higher levels of family shareholdings are related to higher voluntary disclosure.

Previous studies provide very limited studies on the relationship between family ownership and disclosure, such as Haji and Ghazali (2013) show a negative relationship between family ownership and disclosures, which would extend to IR. Meanwhile, in the context of IR studies, Suttipun and Bomlai (2019) found no relationship between family ownership and IR level. Thus, this study proposes the following:
H6: There is a negative relationship between family ownership and IR disclosure level

Government Ownership and Integrated Reporting Disclosure Level

A government-owned company is more politically sensitive as its actions are significant in the public eyes (Ghazali, 2007) and might disclose more information to fulfill societal expectations through corporate reporting, compared to privately-owned companies as they receive more pressure from the societal expectation (Suttipun & Bomlai, 2019). In the context of IR, the greater public concern towards companies with high levels of government ownership and the lower attention of these companies in the disclosure of confidential information could lead to the disclosure of higher-quality integrated reports (Raimo et al., 2020). However, Pham et al (2020) found that government ownership is negatively related to voluntary environmental and social information disclosure.

The empirical evidence provided by previous literature is mixed, and as such, this study may shed additional insight on the relationship between government ownership and IR. Alhazaimeh et al (2014); Eng and Mak (2003); Ghazali (2007); Haji and Ghazali (2013) found a positive relationship between government ownership and disclosure, while Raimo, Vitolla et al (2020) found a negative relationship between government ownership and IR quality. Whereas, Alnabsha et al (2018); Suttipun and Bomlai (2019) found no relationship between board size and disclosure.

Thus, this study proposes the following hypothesis

H7: There is a positive relationship between government ownership and IR disclosure level

Institutional Ownership and Integrated Reporting Disclosure Level
Institutional investors who represent a particular group of shareholders who hold a relatively large number of shares and play an important role as another form of monitoring (Donnelly & Mulcahy, 2008) that might influence the strategic disclosure decision of a company. In the context of IR, in order to reduce agency problems, the pressure of institutions' supervision can lead to a high level of IR disclosure to provide much information (Suttipun & Bomlai, 2019).
The empirical evidence provided by previous literature is mixed, which motivates this study to examine the relationship between institutional ownership and IR. Alhazaimeh et al (2014); Chanatup et al (2020); Raimo et al (2020); Suttipun and Bomlai (2019) found a positive relationship between institutional ownership and disclosure. Meanwhile, Alnabsha et al (2018); Haji and Ghazali (2013) found no relationship between institutional ownership and disclosure.

Thus, this study proposes the following hypothesis
H8: There is a positive relationship between institutional ownership and IR disclosure level

ESG Disclosure, Board Size and Integrated Reporting Disclosure Level
Previous research highlights the relationship between ESG disclosure and board size, such as Ismail et al (2019) examine the relationship between board capabilities and ESG practices through the mediating role of absorptive capacity among the listed companies in FTSE4Good Bursa Malaysia. The study found that ESG practices have a significant relationship with board size. Thus, this study argues that ESG disclosure will bring better perspectives in decision-making by a larger board size, which might, to an extent, enhance the IR disclosure level. Thus, this study proposes the following

H9: ESG disclosure moderates the positive relationship between board size and IR disclosure level.

ESG Disclosure, Board Independence and Integrated Reporting Disclosure Level
Past studies show the correlation between ESG disclosure and board independence. For instance, Ismail et al (2019) found that ESG practices have a significant relationship with board independence. Hence, this study proposes that ESG disclosure will influence the board's independence, such as in making strategic decisions, particularly regarding the IR disclosure level. Thus, this study suggests the following:

H10: ESG disclosure moderates the positive relationship between board independence and IR disclosure level.

ESG Disclosure, Board Gender and Integrated Reporting Disclosure Level
Past research indicates that there is a link between ESG disclosure and board gender. For example, Campanella et al (2020); Lagasio and Cucari (2019); Suttipun (2021); Wasiuzzaman and Wan Mohammad (2020) show that ESG disclosure scores are significantly improved with

the increasing number of female directors on boards. Meanwhile, Ismail et al (2019) found that ESG practices among the listed companies in FTSE4Good Bursa Malaysia have a significant relationship with board diversity. Thus, this study argues that ESG disclosure will result in better perspectives in the decision-making process through a diverse board, such as women directors giving more attention to social issues (Alazzani et al., 2017), which might enhance the IR disclosure level. Thus, this study recommends the following hypothesis:

H11: ESG disclosure moderates the positive relationship between board gender and IR disclosure level.

ESG disclosure, Board Education Level and Integrated Reporting Disclosure Level
When reference is made to the extant studies, it is believed that specific studies that examine the influence of ESG disclosure on board educational level are very much lacking. To the best of the researcher's knowledge, only a study by Songini et al (2021) examine the influence of disclosure on board education level. The research found that IR quality is positively correlated with the level of board education. In particular, referring to a study by Ismail et al (2019), the authors found that ESG practices among the listed companies in FTSE4Good Bursa Malaysia have a significant relationship with board diversity. In this regard, board gender diversity is also measured by the board education level (Songini et al., 2021). Hence, this study argues that ESG disclosure will influence the decision-making process by a diverse education board, which might increase the IR disclosure level. Thus, this study offers the following hypothesis:

H12: ESG disclosures moderates the positive relationship between board education level and IR disclosure level.

ESG Disclosure, Ownership Concentration and Integrated Reporting Disclosure Level
To date, based on the previous studies, there are very limited studies on ESG disclosure and ownership concentration such as Dam and Scholtens (2013) highlight that shareholder concentration is related to CSR policies, and with more concentrated ownership, the CSR of the company gets worse. In this light, previous research refers to CSR as ESG, such as a study by (Wasiuzzaman, 2019). Thus, ownership concentration might lead to poorer ESG disclosure. Based on the previous studies, thus, this study suggests the following hypothesis:

H13: There is a negative relationship between ownership concentration and IR disclosure level with the moderating effect of ESG disclosure.

ESG Disclosure, Family Ownership and Integrated Reporting Disclosure Level
There are very limited studies on ESG disclosure and family ownership, such as Lagasio and Cucari (2019), which found that some hesitations remain in the term of family ownership in regard to ESG disclosure. Thus, this study proposes the following hypothesis

H14: There is a negative relationship between family ownership and IR disclosure level with the moderating effect of ESG disclosure.

ESG disclosure, Government Ownership and Integrated Reporting Disclosure Level
There is a research dearth that examines the relationship between ESG disclosure and government ownership such as Al Amosh and Khatib (2021) found that government

ownerships play a significant role in disclosing ESG performance. Thus, this study argues that ESG disclosure might influence government ownership, which might, to an extent, enhance the IR disclosure level. Thus, this study recommends the following hypothesis

H15: ESG disclosure moderates the positive relationship between government ownership and IR disclosure level.

ESG disclosure, Institutional Ownership and and Integrated Reporting Disclosure Level

Previous studies indicate the relationship between ESG disclosure and institutional ownership, such as Ahmed et al (2014) indicate that Corporate Social Performance, which is one of the ESG proxies, has a positive but insignificant relationship with institutional ownership. Meanwhile, sustainability reporting has a positive effect on ownership by dedicated institutions, namely government-managed pension funds, government-managed unit trust funds, and government-managed pilgrims funds (Abd Mutalib et al., 2015). In this light, ESG is one of the initiatives under sustainability (Ismail et al., 2019). Thus, this study suggests that ESG disclosure might have an influence on institutional ownership, which might increase the IR disclosure level. Thus, this study offers the following hypothesis:

H16: ESG disclosure moderates the positive relationship between institutional ownership and IR disclosure level.

Conclusions

In response to the global corporate reporting transition toward IR and as supported by the theoretical analysis mentioned earlier, this study proposes that BOD and ownership structure are important determinants to guide the effective decision of a company on the IR disclosure level. Besides, the relationship between BOD and ownership structure on IR disclosure level could be stronger in companies with higher ESG disclosure. The practical implications of this framework might be very useful to Malaysian companies, in particular those with high ESG disclosure in regard to value creation, reducing information asymmetries, and increasing transparency through the IR disclosure level. Besides, this study might be useful for both 'traditional investors' and 'socially responsible investors' when selecting stocks for portfolios as IR focus on both investors who seek value-creating investments. This framework is also might assist regulators such as Securities Commission Malaysia (SCM) on the IR regulation. This study hopes to contribute to the literature by further analyzing the influence of external CG mechanisms, the ownership structure. Besides, this study includes the moderator variables, which have been pretty much ignored by most previous studies, and it also differs from previous studies on IR that mostly observed primarily the adoption. Further, the education level of directors, which are less tested in IR literature, is investigated in this study, as suggested by previous studies. For the purpose of future theoretical and empirical improvement, it would be interesting to examine other influences of factors such as the audit committee and risk committee. Besides, future studies could include comparison among Asian countries.

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