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Does good corporate governance lead to better sustainability reporting? an analysis using structural equation modeling

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Abstract

This paper examines the impact of good corporate governance (CG) on the sustainability disclosure of 100 public listed companies in Malaysia from the perspective of agency theory. The data was analysed using Structural Equation Modelling technique of Partial Least Squares. The findings from the study indicate that board size, professionalism and board designation had a significant impact on sustainability disclosure. However, board independence and board ownership were not significant in motivating sustainability disclosure. The findings from this study provide enhance understanding of the determinants of sustainability reporting and confirm the appropriateness of agency theory in examining studies of this nature.

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1. Introduction

Corporate governance (CG) in particular board of directors can play a significant role in enhancing corporate social responsibility (CSR) performance (Zahra, 1989) and in firms' dedication and adoption of ethical practices within an entire organizational structure (N.Al-Malkawi, Pillai, and Bhattti, 2014). When there is a separation of ownership between the owners-shareholders (principals) and the managers (agents), the shareholders are unable to

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engage in management and it is the responsibility of the board to represent the shareholder's interests. The board of directors of companies has the task to ensure that managers of corporations use the assets to maximize shareholders' value. In addition, the board of directors is also expected to facilitate and monitor the effectiveness of management to ensure legal compliance and to prevent unlawful and improper behavior. Agents are likely to have different motives than their principals. In short, to safeguard various stakeholders' interests, a good corporate governance (CG) is required (N.Al-Malkawi et al., 2014). As pointed out by Güler and Crowther, (2008), good governance levels can improve public faith and confidence in the political environment. Whether the board of directors actually influences the dominant values of a company's vision and mission to maximize their shareholders value is a subject of much literature debate. Nevertheless, the trend now is that the board of directors of a company tends to be given the responsibility to consider both the financial and social needs in setting a company's objective. Hence, in addition to focusing on the bottom line figure, companies need to contribute to the well-being of their communities, environment, and societies or commonly referred as sustainability performance by many researchers. Hence, this study aims to examine the influence of good corporate governance (CG) specifically board characteristics on sustainability reporting.

The remainder of this paper is organized as follows. Section 2 discusses the literature review and hypotheses generation. Section 3 discusses the research methodology. The research findings are reviewed in Section 4. The final section highlights the conclusion and implications of the results.

2. Literature Review and Hypotheses Generation

The term sustainability has been widely used by corporations in relation to their present activity (Güler & Crowther, 2009). In this study, the term sustainability and the general understanding of its meaning is based upon the Brundtland Report published by Oxford University Press in 1987 which defined the term as:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

The report highlighted the urgency of making progress towards economic development that could be sustained without depleting natural resources or harming the environment. The report highlighted three fundamental components to sustainable development; environmental protection, economic growth and social equity. Sustainability reporting guidelines for Malaysian companies by ACCA (2005) details out these three components as follows:

Table 1. Three components of sustainability reporting

Environmental reporting	impacts of processes, products and services on air, water, land, biodiversity and human health
Social reporting	workplace health and safety, employee retention, labour rights, human rights, wages and working conditions at outsources operation
Economic reporting	payroll expense, job creation, labour productivity, expenditures on outsourcing, R&D, investments in training and other forms of human capital

The growing concern over the social and environmental impact of business and the impact of social and environmental issues has lead companies to actively account for and manage their sustainability footprint (Adams and Frost, 2008). A large body of research efforts are now directed towards establishing an integration between the ethical, social, environmental and economic performance within corporate reports (Adams and Frost, 2008) and in case of CSR to examine its relationship with economic performance (Jackson and Apostolakou, 2010). Despite the extensive research on sustainability, there are relatively few studies that have investigated the relationship of good governance in particular, board characteristics and its influence on the development and diffusion of sustainability practices. According to Güler and Crowther (2008), there are four principles of good corporate governance namely; (1) transparency, (2) accountability, (3) responsibility; and (4) fairness. Even though the actual definition of good

corporate governance is subject to debate, Güler and Crowther (2008) believed that it should address points of sustainable value creation, achieving the firm's goals and keeping a balance between economic and social benefit.

The relevance of CSR disclosure in annual reports has encouraged numerous studies on this debate. There are studies that focused on the relationship between firms' characteristics and disclosure (Güler and Crowther, 2008; Chiang and Kuo, 2006; Janggu, Joseph, and Madi, 2007) while others focused on the benefits of CSR disclosure (Said, Zainuddin, and Haron, 2009) which in turn is argued to be directly related to the sustainability of a firm (Güler and Crowther, 2008). In addition, Güler and Crowther (2008) believed that some attentions should be paid towards sustainability within the governance of a corporation. In this study, six (6) board characteristics namely, board size, board ownership, board professionalism, board independence, board designation and foreign boards and their relationship with sustainability disclosure was investigated.

In Malaysia, one notable prior research investigating the relationship between CSR and corporate governance characteristics was by Said et al. (2009). Based on a full regression model, their study concluded that only government ownership and audit committee were found to have a positive and significant relationship with the level of CSR disclosure. With regards to directors' ownership as measured by the percentage of shares held by the executive directors, findings from prior literature were mixed. Zahra (1989) found a negative association with CSR practices in Malaysia, while Ghazali and Weetman, (2006) found a strong effect on voluntary disclosure. However, Said et al. (2009) found no such relationship.

Board independence as measured by the number of independent directors on board over the total number of directors has a significant strong positive impact on both contemporaneous and on subsequent operating performance (Muller, 2014) but Said et al. (2009) found no such relationship in Malaysia. On foreign directors on board, a study by Zahra (1989) concluded that corporate governance characteristics and firm performance was statistically significant but Said et al. (2009) found no significant relationship. However, Muller, (2014) reaffirmed Zahra's finding for companies that were listed on the 100 largest European stock market (London Exchange) in the period of 2010-2011. He found that the proportion of foreign directors in relation to the total number of directors have a significant strong positive impact on firm performance (both contemporaneous and subsequent).

In oil rich countries, N.Al-Malkawi et al. (2014) found that board effectiveness and composition does not show high levels of adherence to corporate governance by Gulf Cooperation Council (GCC) companies. Previous findings found that the result concerning the impact of membership diversity on CSR performance (CSRP) is not uniform. N.Al-Malkawi et al. (2014) found that the diversity of board membership is positively associated with CSR performance; however diversity in education is not related to CSRP. Zahra, (1989), however, found that diversity in directors' board tenure is significantly associated with both charity and CSRP.

The relationship between board size and CSRP was inconclusive. Jensen (1993) concluded that larger board is less effective in coordinating communication and decision making and is more likely to be controlled by the CEO. On the other hand, board size was found to be negatively related with firm value (Naveen Kumar and Singh, 2013; Ujunwa, 2012) but was statistically rejected by Said et al. (2009) with regards to CSR performance in Malaysia.

Generally, the literature has indicated a significant positive relationship between board characteristics and sustainability disclosure. Thus, the following hypotheses were proposed:

H1. Board size is positively and significantly related to sustainability disclosure
H2. Board ownership is positively and significantly related to sustainability disclosure
H3. Board professionalism is positively and significantly related to sustainability disclosure
H4. Board independence is positively and significantly related to sustainability disclosure
H5. Board designation is positively and significantly related to sustainability disclosure
H6. Foreign members on board is positively and significantly related to sustainability disclosure

3. Research Method

The sample for this study is public listed companies in Malaysia for the financial year ended 31st December 2010. A stratified random sampling technique was employed to obtain 100 samples from a list of 818 public listed companies as at the end of the financial year 2010. Data was collected using content analysis of the annual reports. The dependent variable was sustainability disclosure which was measured both in terms of the quality and quantity of disclosure. The quantity of disclosure was measured by the number of sentences of disclosure while the quality of

disclosure was measured on a six point "Likert" scale with 0 = No disclosure, 1 = Item mentioned in general (in 1 or 2 sentences), 2 = Brief explanation (in 3 to 5 sentences), 3= Items described in great details with photos or justification, 4 = Items briefly described which included cost incurred and photos or graph, 5 = Detailed explanation of activities or items with cost involved.

Contrary to previous studies, this study used Partial Least Square – Structural Equation Modelling (PLS-SEM) approach which has been widely applied in the field of psychology, sociology, education, and marketing but not in finance and economics (Saarani and Shahadan, 2012) and not is readily adopted in the accounting discipline (Lee, Petter, Fayard, and Robinson, 2011). PLS is normally closely associated with the analysis of latent constructs in a survey-based research and has also been used with data collected via other medium including secondary data (Lee et al., 2011). In an editorial remark Hair, Ringle, and Sartedt (2013) highlighted that PLS-SEM approach has enjoyed increasing popularity as a key multivariate analysis such as in the accounting discipline. The data for this study was analysed using SmartPLS® software version 2.0 developed by Ringle, Wende and Will in 2005.

4. Results and discussion

Table 2 summarizes the population and samples for the study.

Table 2. Population and samples

Industry	Population	Sample	Percent
Industrial	255	30	11.76
Trading	173	21	12.14
Consumer	138	17	12.32
Properties	90	13	14.44
Construction	43	4	9.30
Plantation	42	5	11.9
Finance	37	5	13.51
Technology	29	5	17.24
Infrastructure & Hotel	11	0	0
Total	818	100	12.22

4.1 The measurement model

Table 3 summarizes the results of the internal reliability and convergent validity for the constructs. Convergent validity was assessed based on factor loadings, composite reliability, and variance extracted through a procedure called Fornell and Lacker, 1981. The results for the convergent validity are presented in Table 2. All the factor loadings were above the recommended level of 0.5 (Chin, 1998). The estimates value of average variance extracted (AVE) for all constructs were also above the recommended threshold value of 0.5 as suggested by Hair, Black, Babin, and Anderson, 2010). The AVE reflects the overall amount of variance in the indicators that are accounted for by the latent construct. Finally, the composite reliability (CR) which measures how well a construct is measured by its assigned indicators indicates a value of between 0.691 and 1.00. A commonly acceptable threshold value for CR is 0.7 or more, however values below 0.7 have also been considered as acceptable (Hair et al., 2010). Following Saarani and Shahadan (2012), this study used 0.6 as a minimum cut-off point for CR.

Table 3. Results of measurement model

Constructs	Items	Convergent validity		
		Loadings	AVE	CR
Ownership	BODSh	0.896	0.544	0.691
	BODdirectint	0.533		
Designation	BODdatuk	1.000	1.000	1.000
Foreign	BODforeign	1.000	1.000	1.000
Independent	BODindep	1.000	1.000	1.000
Professionalism	BODmaster	0.786	0.530	0.691
	BODprof	0.665		
Size	BODsize	1.000	1.000	1.000
Sustainability	SustLevel	0.923	0.831	0.908
	SustQuality	0.899		

Table 4 presents the results for the discriminant validity of constructs. The discriminant validity measures the degree to which the measures of different concepts are distinct. Discriminant validity can be examined by comparing the correlation between the constructs and the square root of the variance extracted for a construct as shown in Table 3. The results showed that the correlations for each construct was less than a square root of the AVE by the indicators measuring that construct indicating that the measure had adequate discriminant validity. In summary, the measurement model demonstrated adequate reliability, convergent validity, and discriminant validity.

Table 4. Discriminant validity of constructs

	Designation	Foreign	Indep	Owner-ship	Profes-sionalism	SUSTAIN-ABILITY	Size
Designation	1.000						
Foreign	-0.029	1.000					
Indep	0.178	-0.068	1.000				
Ownership	-0.291	-0.134	-0.195	0.737			
Professionalism	0.231	0.157	0.246	-0.192	0.728		
SUSTAINABILITY	0.266	0.112	-0.124	-0.181	0.230	0.911	
Size	0.107	0.033	-0.328	-0.089	-0.125	0.377	1.000

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations.

4.2 The structural model

Figure 1 presents the explanatory capacity of the structural model for the study. The structural model indicates the causal relationships among the constructs in the model, which includes the estimates of the path coefficients and the coefficient of determination, R^2 value. Together, the R^2 and path coefficients (loadings and significance) indicate how well the data support the hypothesized model (Chin, 1998). The R^2 value for the relationship between the independent variables and sustainability disclosures was 0.263 which indicates that 26.3% of the variance in sustainability disclosures can be explained by board characteristics, which is considered substantial (Cohen, 1998).

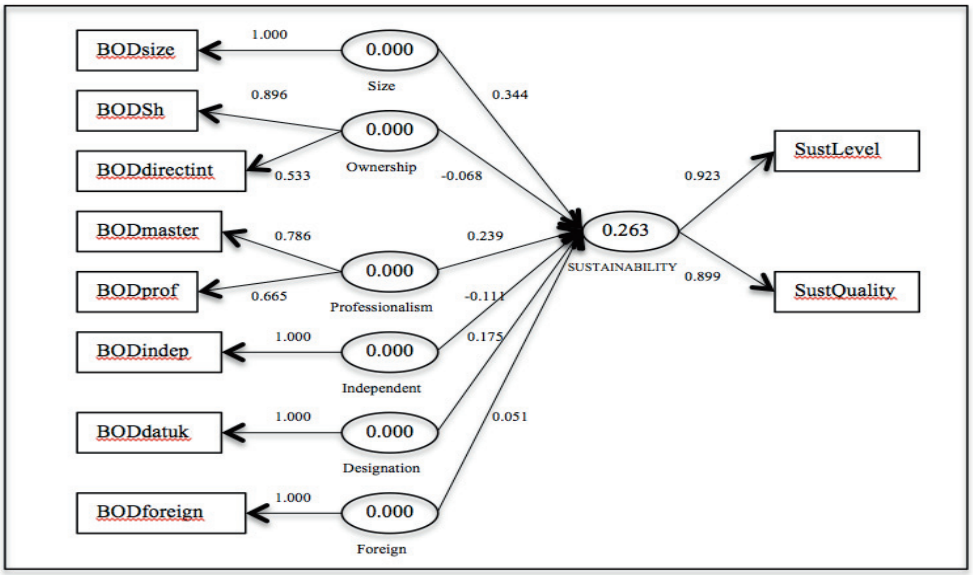

Fig. 1. Explanatory capacity of the structural model

After evaluating the explanatory capacity of the structural model, the statistical significance of the various structural coefficients was tested through the technique called bootstrapping (run with cases = 100 and samples = 5,000) to generate t-statistic value associated with each path. The outcome is shown in Table 5.

Table 5: Results of hypothesis testing

Hypotheses	Path coefficient	Beta	SE	t-value	Decision
H1	Size -> SUSTAINABILITY	0.344	0.097	3.544**	Supported
H2	Ownership -> SUSTAINABILITY	(0.068)	0.086	0.794	Not
H3	Professionalism -> SUSTAINABILITY	0.239	0.108	2.206 *	Supported
H4	Indep -> SUSTAINABILITY	(0.111)	0.091	1.218	Not
H5	Designation -> SUSTAINABILITY	0.175	0.101	1.739*	Supported
H6	Foreign -> SUSTAINABILITY	0.051	0.117	0.434	Not

**p<0.01 (t-value>2.33), *p<0.05 (t-value > 1.645)

The results of the study shows that size of the board (H1), professionalism (H3), and board designation (H5) have significant t-value. Therefore, the hypotheses can be supported. The size of the board was the strongest predictor of sustainability reporting followed by the number of board members who are the members of professional bodies. Board designation which is the number of board members with the title Datuk" came in third. The statistical results suggested that bigger boards will have a stronger influence on the level and quality of sustainability disclosure. The results of the study imply that larger boards will be able to satisfy the information demands of investors, which in turn will be attractive to prospective investors of the company and will allow them to be more competitive for international funding. This finding contradicted previous result by Jensen (1993) but provide justification for findings by Said et al. (2009) that claimed larger boards results in more effective coordination, communication and decision making. With regards to professionalism, the results imply that companies whose board members possess a professional qualification or a master degree will facilitate companies to disclose more sustainability information. This finding is consistent with regard to financial performance of Nigerian companies where the coefficient of board members with PhD is found positively and significantly associated with financial performance. Designation of board members seemed to also influence the sustainability of information in the annual reports. The results for board ownership were not consistent with prior literature as the statistical results revealed negative but weak relationship between board ownership and sustainability disclosure. It appears that owner-managed companies continue to be more secretive about their activities, preserving a tradition inherited from the past and may lack professional involvement (Ghazali and Weetman, 2006). Finally, composition of independent and foreign directors corroborated previous findings by Ghazali and Weetman (2006) that independent directors do not have a significant influence on sustainability disclosure.

5. Conclusion

This study aims to examine the influence of board characteristics on CSR disclosure. The results generated from the structural model indicate that board characteristics have a relatively substantial influence on CSR reporting. The convergent and discriminant validity tests of the constructs confirmed that the data fit well with the developed model. Therefore it can be concluded that the identified variables i.e board characteristics is valid for testing of the determinants factors for sustainability disclosures. Board size was found to be the strongest determinant of sustainability disclosures followed by board professionalism and board designation. The results imply that the larger the board the greater the influence it has on sustainability issues. This is also true with board professionalism and board designation. Statistical tests further confirmed that board ownership, board independence, and foreign board members were not significant influence of sustainability disclosures. Thus, it can be concluded that to improve sustainability performance and thereafter sustainability reporting, it is crucial that board characteristics especially board size, board professionalism and board designation be taken into consideration in determining the composition of the board as such characteristics will provide a diverse perspective in the context of sustainability which in turn will improve the organizations' social role.

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