



UNIVERSITY
OF WOLLONGONG
AUSTRALIA

University of Wollongong
Research Online

Faculty of Business - Papers

Faculty of Business

2016

Board diversity and corporate social disclosure: evidence from Vietnam

Trang Cam Hoang

Ton Duc Thang University, tch855@uowmail.edu.au

Indra Abeysekera

Central Queensland University, indraa@uow.edu.au

Shiguang Ma

University of Wollongong, shiguang@uow.edu.au

Publication Details

Hoang, T. Cam., Abeysekera, I. & Ma, S. (2016). Board diversity and corporate social disclosure: evidence from Vietnam. *Journal of Business Ethics*, Online First 1-20.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library:
research-pubs@uow.edu.au

Board diversity and corporate social disclosure: evidence from Vietnam

Abstract

Debates around sound corporate governance propose board diversity as a key attribute to sufficiently challenge executive management for stakeholder engagement. This study contributes to this debate by empirically investigating the effect of board diversity on corporate social disclosure (CSD) of Vietnamese listed firms. The study finds a significantly positive effect of diversity-in-boards (dissimilarities among directors within a board, i.e., demographic attributes of board members) on CSD while diversity-of-boards (dissimilarities among firm boards, i.e., board structure) has no effect on CSD. The results contribute by showing that a single theoretical approach can provide an adequate explanation for board diversity. The study contributes methodologically by demonstrating the design and measurement of board diversity indices, and a three-dimensional stakeholder-relevant CSD index. The findings benefit regulators and corporate executives in better understanding firms' CSD practices and stakeholders' expectations.

Disciplines

Business

Publication Details

Hoang, T. Cam., Abeysekera, I. & Ma, S. (2016). Board diversity and corporate social disclosure: evidence from Vietnam. *Journal of Business Ethics*, Online First 1-20.

Board Diversity and Corporate Social Disclosure: Evidence from Vietnam

Trang Cam Hoang¹, Indra Abeysekera², Shiguang Ma³

Abstract

Debates around sound corporate governance propose board diversity as a key attribute to sufficiently challenge executive management for stakeholder engagement. This study contributes to this debate by empirically investigating the effect of board diversity on corporate social disclosure (CSD) of Vietnamese listed firms. The study finds a significantly positive effect of diversity-in-boards (dissimilarities among directors within a board, i.e., demographic attributes of board members) on CSD while diversity-of-boards (dissimilarities among firm boards, i.e., board structure) has no effect on CSD. The results contribute by showing that a single theoretical approach can provide an adequate explanation for board diversity. The study contributes methodologically by demonstrating the design and measurement of board diversity indices, and a three-dimensional stakeholder-relevant CSD index. The findings benefit regulators and corporate executives in better understanding firms' CSD practices and stakeholders' expectations.

Key words: board of directors, corporate social disclosure, diversity, diversity-in-boards, diversity-of-boards, Vietnam.

¹ Trang Cam Hoang , Faculty of Accounting, Ton Duc Thang University, Vietnam. hoangcamtrang@tdt.edu.au

² Indra Abeysekera, S P Jain School of Management, Australia. indraabeysekera@gmail.com

³ Shiguang Ma, School of Accounting, Economics and Finance, University of Wollongong, Australia, Shiguang@uow.edu.au

Introduction

A board of directors is the cornerstone of corporate governance frameworks. There are numerous factors that signify various dimensions of a board, and board diversity is one of the most important (Kang et al. 2007, Milliken and Martins 1996). The breadth of factors relating to board diversity make it difficult to define the term explicitly (Harrison and Klein 2007). Several scholars have examined the implications of board diversity in relation to firm's outcomes by defining it operationally (Hafsi and Turgut 2013). Some studies refer to board diversity as a demographic phenomenon entailing age, gender, and ethnicity, while others refer to board diversity as a structural phenomenon comprising CEO duality, board independence, and director ownership. Hafsi and Turgut's (2013) study differs from prior studies in approaching the factors of board diversity from both dimensions. They classify factors relating to the demographic phenomenon as a diversity-in-boards index, and factors relating to the structural phenomenon as a diversity-of-boards index.

Although such stakeholder scrutiny is much stronger in developed nations, recent empirical studies have shown an increasing trend of corporate social responsibility disclosure in developing countries (Haji 2013). Despite this welcome trend, studies in both developed and developing countries have mainly focused on disclosure quantity (Ho and Wong 2001, Xiao and Yuan 2007), and a limited number of empirical studies have investigated disclosure quality (Haji 2013). To combine disclosure quantity and disclosure quality, this study measures corporate social disclosure (CSD) using three dimensions which combine disclosure quantity and two aspects of disclosure quality from the stakeholder perspective: the quality of the items disclosed and the quality of the types of disclosure about CSD, as perceived by stakeholders.

This investigation is especially pertinent to developing countries, where the understanding of CSD practices is still poor because such practices are perceived as philanthropic activities. Bui (2010) also shows that in the past Vietnamese firms have paid little attention to CSD for three main reasons: the firms do not understand disclosure impacts on society, and lack both

financial resources and an enforcing legal framework. These factors have discouraged firms from adopting CSD in their corporate policies. While international economic integration has helped Vietnamese businesses to expand their activities globally, they have been also facing important issues for sustainable development, especially relating to society and the environment. Recent scandals concerning serious factory-generated pollution of the Thi-Vai river and various health safety cases such as tainted milk distribution, toxic ingredients in consumer goods, and pesticide residue in vegetables have resulted in a greater concern for social responsibility in Vietnam. Along with these environmental and health issues, Vietnamese export companies have been also encountering issues relating to certification and standards when their foreign investors and buyers require them to adopt business practices based on respect for people, communities and the environment. For example, the U.S.–Vietnam textiles agreement of 2003 included an obligation for the Vietnamese authorities to encourage exporting companies to implement corporate social responsibility codes in the U.S. and disclose about them in return for access to the U.S. market. Additionally, Vietnam’s ten-year Socio-Economic Development Plan (2011–2020) shows the beginnings of a policy focus on structural reforms, environmental sustainability, social equity, and macro-economic stability (World Bank 2015).

It is proposed that board diversity can help challenge management to show responsibility beyond shareholders (CIMA 2011). This is pertinent to a country such as Vietnam, as explosive economic growth propelled by Vietnamese firms can also bring social problems. In spite of an increasing awareness of CSD among Vietnamese firms recently, there has not been any research that has examined the effect of board diversity on CSD in Vietnamese listed firms.

As adopted by Strand (1983), corporate social performance refers to a firm’s anticipated or existing social demands, and corporate social disclosures are disclosures about these demands. Importantly, this study does not equate CSD with social performance, the locus of a

great debate in the literature (Ullmann 1985). We focus here on CSD in annual reports rather than on social performance because CSD, similar to earnings, is easily spotted (Yip et al., 2011). Annual reports are the main public document and are regularly produced to communicate corporate review, whereas measuring social performance, especially in developing countries like Vietnam, is difficult because there is no database from which to elicit information about such performance. In addition, in the absence of formalized social performance information in databases, and given that measuring social performance requires measuring from several dimensions, manual measurement can lead to higher margins of error (Yip et al. 2011).

1. Literature review

Recent research has shown that CSD brings firms greater utility. Cheng, Ioannou and Serafeim (2014) and Ioannou and Serafeim (2015) find that firms with better CSD have lower capital constraints and better access to finance. Dhaliwal et al. (2011) show that firms experience a decrease in cost of equity capital after issuing a CSR report. Dhaliwal et al. (2012) find that the issuance of stand-alone CSR reports is associated with lower analyst forecast error. Brammer and Pavelin (2008) document that environmental disclosure eases legislative pressures and brings economic benefits in the future (Matsumura et al. 2014).

A large number of studies on the relationship between corporate governance and corporate disclosure have been done around the world. For example, Chen and Jaggi (2000) find a positive relation between board independence and voluntary disclosure of Hong Kong listed firms. In contrast, in Singapore, Eng and Mak (2003) find that an increase in outside directors decreases corporate disclosure. Unlike these findings, Matolcsy et al. (2012) show that there is no association between board composition and certain types of disclosure of Australian Stock Exchange listed firms. The mixed findings of studies show that country-specific factors may moderate the association between corporate governance and corporate disclosure.

Previous studies have also mainly examined the effect of isolated factors concerning the structure of the board of directors, on corporate social responsibility or corporate social performance (Haniffa and Cooke 2005, Naser et al. 2006, Prado-Lorenzo et al. 2009), and have produced mixed findings. Some studies find that independent directors are positively related to corporate social responsibility disclosure (Lattemann et al. 2009, Webb 2004). Others find a negative relationship (Haniffa and Cooke 2005). Still others find no association (Cormier et al. 2011, Michelon and Parbonetti 2012). Another feature of prior studies is that they primarily investigate factors to do with the board of directors' demographic dimensions in isolation. In particular, they have been mainly about gender diversity impacting on corporate social responsibility disclosure. Corporate social responsibility or corporate social performance in these studies is measured based on the available databases such as the FTSE4 Good Global Index, KLD, KEJI Index, and SiRi ProTM. These studies however bring important revelations. For instance, they show that female directors positively influence charitable giving (Wang and Coffey 1992, Williams 2003), as well as safe and healthy work environments (Bernardi et al. 2006, Johnson and Greening 1999).

In this context, Hafsi and Turgut (2013) make a vital contribution to understanding board diversity. Examining the influence of board diversity from two dimensions on the social performance of firms listed on S&P 500, they discover that diversity-in-boards is statistically significant and positively related to social performance, and that diversity-of-boards does not significantly influence social performance.

There is only one study (Vu et al. 2011) that has investigated the influence of corporate governance on voluntary disclosures, including social disclosure, in Vietnam. Looking at 45 Vietnamese listed firms in 2008, that study uses the percentage of independent directors as a proxy measure for corporate governance, and measures the disclosure quantity. Controlling for the influence that ownership structure can have on voluntary disclosures, Vu et al. (2011) find low disclosure levels among Vietnamese listed firms. They also find that state ownership

in firms negatively influences social disclosure, but managerial ownership positively influences disclosure. Additionally, larger firms are positively associated with voluntary disclosure.

This study embraces the dichotomous classification of the diversity of the board of directors adopted by Hafsi and Turgut (2013). However, this study contextualizes the attributes of diversity-in-boards and diversity-of-boards to Vietnam, an emerging market. This is done on the basis that prior research concludes that governance structures probably develop endogeneity depending on firm-specific characteristics and the unique business environment in a particular country (Demirguc-Kunt et al. 2006, Haniffa and Hudaib 2006, Love 2011). Further, this study first assumes that attributes of board diversity are of equal importance (unweighted method), and then assigns unequal importance to measure diversity-in-boards and diversity-of-boards indices. The weights are based on the responses received from a survey questionnaire answered by listed firms' executives on the relative importance of these attributes in relation to CSD. A comparison of results between these two measurement methods (weighted and unweighted) allows this study to investigate the potential impact of the perceived importance of attributes relating to the diversity-in-boards and diversity-of-boards and their relationship with CSD. Therefore, this study extends Hafsi and Turgut's (2013) and Vu et al.'s (2011) studies while examining the influence of board diversity on CSD in Vietnam.

2. Theoretical framework

Resource dependence theory and agency theory are two organizational theories that underpin how board diversity influences CSD (Bear et al. 2010). Although Bear et al. (2010) use these theories to investigate the impact of board diversity on corporate social responsibility ratings, not disclosure, prior studies show a link between corporate social responsibility ratings and disclosure. For example, Gelb and Strawser (2001) find that firms with higher corporate social responsibility ratings provide more extensive disclosures, suggesting that corporate

social responsibility reports published by firms reflect corporate social responsibility performance. Similarly, Dhaliwal et al. (2011) also show that firms with better corporate social responsibility performance are more likely to disclose their corporate social responsibility activities to the market.

Board diversity is presented as both fiduciary and advisory in nature. These roles may affect CSD differently. From the fiduciary perspective, agency theory offers an intention of the board of directors to monitor managerial actions affecting shareholders (Fama and Jensen 1983). This monitoring role ensures that the interest of managers aligns with that of shareholders, including minority shareholders (Fama 1980, Fama and Jensen 1983). The key aim of the board of directors' fiduciary duty is to minimize agency costs. Since monitoring is a fiduciary function of the board, how effectively a board monitors whether managers act to serve their self-interest rather than the interests of the shareholders they represent can differ between boards.

From the advisory perspective of governance, the diversity among board members within a firm is a resource firms depend on for good governance (Pfeffer and Salancik 1978). Resource dependence theory shows that improving social relationships is likely to result in economic returns for a firm (Hafsi and Turgut 2013). Resource dependence theory suggests that the board of directors is a resource for a firm, comprising expertise, advice, reputation, and information networks that the directors bring to the firm (Hillman and Dalziel 2003). Diversity among board members can engage responsibility towards society as well as towards shareholders, as some directors can introduce values such as economic development being concomitant with moral development (Boyd 1990, Labelle et al. 2010).

3.1 Research hypotheses

The structural attributes of the board are vital to corporate governance practices (Haniffa and Cooke 2002) and can influence the disclosures made in annual reports of the firm (Haniffa and Cooke 2005). Using the proposition of agency theory, the structural attributes of a board

can offer a guarantee that the board will fulfill its fiduciary function by aligning firms goals with the stakeholder interests (Fama and Jensen 1983, Haniffa and Cooke 2005). Such alignment can enhance reporting transparency and can lead to high-quality dissemination of social information. Based on this perspective, the following hypothesis is proposed:

Hypothesis 1: Higher diversity-of-boards leads to higher CSD.

Prior studies mostly find a positive relationship between women in the boardroom and social performance (e.g., Boulouta 2013, Williams 2003) or social disclosure (e.g., Galbreath 2011). Hafsi and Turgut (2013) find that diversity-in-boards significantly and positively associates with social performance. Using the proposition of resource dependence theory, diversity among directors in a firm is a necessary resource for a firm to realize and respond to the impact of its activities on the environment (Boyd 1990). That realization can assist the firm in addressing CSD issues and adopting appropriate disclosure practices. In line with prior findings and resource dependence theory, this research argues that diversity-in-boards leads to CSD relevant to stakeholders. The following hypothesis is therefore stated.

Hypothesis 2: Higher diversity-in-boards leads to higher CSD.

3. Methodology

4.1 Measuring CSD

Content analysis has been used extensively in examining firms' voluntary disclosure (Abeysekera and Guthrie 2005, Haniffa and Cooke 2005), and is used in this study to examine the extent of CSD in annual reports.

In analyzing the annual report content of Vietnamese firms, one author coded all the annual reports for the social information to ensure consistent and valid data collection. This was repeated after two weeks by the same author (Haji 2013, Weetman and Ghazali 2006) to establish intra-rater reliability. As a second step to establish inter-rater reliability, another author coded ten randomly selected annual reports and found no significant difference between the two coders. It should be noted that reliability of content analysis can be achieved

through having multiple coders, or alternatively by having a single coder assign the scores and then take some additional time to review the assigned scores (Neuendorf, 2002, Haji 2013). Additionally, Milne and Adler (1999) explain that there are several different ways to measure reliability, and there is no single criterion of adequate reliability within any of these methods.

This study uses the social indicators section in the Global Reporting Initiative (GRI) 3.1 framework to measure CSD. The framework is versatile across firms and geographies. Currently, the GRI framework is extensively used to assess and measure Sustainability Reporting, including CSD (Hopkins 2012). The social indicators in the GRI 3.1 index are classified into four vital performance aspects: product responsibility, society, human rights, and labor practices. The items in the index include 15 labor practices indicators (LA1 to LA15), 11 human rights indicators (HR1 to HR11), 10 society indicators (SO1 to SO10), and 9 product responsibility indicators (PR1 to PR9). These GRI framework items are used to obtain information about CSD from annual reports (Adams 2002).

4.2 Measuring disclosure quantity

This study measures disclosure quantity, by assigning “1” if an item is present in the annual report, otherwise zero. This binary coding is consistent with CSD studies of firms in emerging nations (Haji 2013, Haniffa and Cooke 2005, Khan et al. 2013).

4.3 Measuring disclosed item quality and disclosed type quality

Using the binary approach to measure disclosure quantity has been criticized for assuming all disclosure items are equally important (Barako et al. 2006). Lu and Abeysekera (2014) overcome that assumption by combining the importance of disclosure items and the importance of disclosure types into disclosure quantity, in examining social and environmental disclosure. They ascertain the importance of disclosure items (i.e., disclosed item quality) and disclosure types (i.e., disclosed type quality) by questioning 12 stakeholders, and assign weights accordingly. Following the approach initiated by Lu and Abeysekera

(2014), this study obtains perceptions from 652 stakeholders about the importance of disclosed items.

This study conducts a survey of stakeholders to obtain their perspectives on disclosure type preference (i.e., monetary quantification, numerical quantification, narrative, or both monetary and numerical) (Guthrie and Parker 1990), and the importance of reporting items (i.e., items in the social indicators of GRI 3.1). If the same item is disclosed more than once with different types, an average score is computed to allow each item to contribute once to the overall results.

This study prepared four different questionnaire versions for four different stakeholder groups, and the questionnaires were hand delivered to respondents. The employee questionnaire (labor stakeholders) asked about labor practices. The customer questionnaire (product stakeholders) invited responses on aspects of product responsibility. The local communities questionnaire (society stakeholders) asked members of local communities about societal aspects. The social equity questionnaire asked lawyers and regulators (human rights stakeholders) to respond about human rights aspects. These groups of users were selected based on their likely differences of interest on social issues, aligning with the range of expectations set out in the GRI 3.1, as follows. The product responsibility indicators address the aspects of a reporting organization's products and services that directly affect customers. The society indicators focus attention on the impact that organizations have on local communities. Labor practices indicators act as a dialogue between the company and its employees, and the degree to which employees are organized in representative bodies. Human rights indicators require organizations to report on the extent to which processes have been implemented, on incidents of human rights violations, and on changes in the stakeholders' ability to enjoy and exercise their human rights during the reporting period. Lawyers and regulators were included to encompass this aspect.

The literature notes that shareholders are considered one of the most important stakeholder groups regarding CSD (Aerts et al. 2007, 2008, Berthelot et al. 2012, Clarkson et al. 2013, Cormier et al. 2011, Dhaliwal et al. 2011, Dhaliwal et al. 2012, Ioannou & Serafeim 2014). The four stakeholder groups selected for the survey, however, did not include shareholders, consistent with the GRI 3.1 framework adopted in this study where shareholder interest is not separately identified but is posited to be in all stakeholder groups.

The questionnaire used in the study has a scale of zero (unimportant) to 10 (the most important), making it an 11-point scale. A wide scale increases the variance of responses obtained and makes the results more reliable (Dawes 2002, Hartley and Betts 2010). The stakeholder-specific groups were requested to rate each item from zero to 10 based on their perceptions of how important the item was to them and how the items should be disclosed. In relation to how an item should be disclosed, they evaluated four disclosure types (i.e., narrative, monetary quantification, numerical quantification, both monetary and numerical) for each item using a zero-to-10 rating scale.

The weight for a particular item is computed by the total of the integer values assigned to the item and then divided by the number of individuals who responded to the item. Similarly, the level of importance for each type (i.e., narrative, monetary quantification, numerical quantification, both monetary and numerical) of a particular item is calculated by the total of the integer values assigned to each particular type of disclosure for each item and then divided by the number of respondents for this type. A mean score is used to summarize the response scores within a specific stakeholder group.

4.4 The stakeholder-driven, three-dimensional CSD index

The CSD in this research is driven by stakeholders and has three dimensions. The three dimensions are combined to develop a CSD index. The CSD index of a firm is computed according to the following equation:

$$CSD_j = \frac{\sum_{i=1}^n Quantity_i \times ItemQuality_i \times TypeQuality_i}{\max(SCORE_i)} \quad (1)$$

where CSD_j = a stakeholder-driven, three-dimensional index of firm j ; $Quantity_i$ = the disclosure or non-disclosure of an item i with regard to this item's disclosure type in firm j ; $ItemQuality_i$ = the weight of the item i disclosed; $TypeQuality_i$ = the weight for the type (i.e., narrative, monetary quantification, numerical quantification, or both monetary and numerical) of the item i disclosed; n = the number of items within the checklist; $\max(SCORE)$ = the highest score of three disclosed dimensions for a specified firm: disclosed quantity score x disclosed item quality score x disclosed type quality score.

4.5 Measures of board diversity

Four board diversity indices are constructed to measure board diversity: an unweighted diversity-of-boards index (UW_DoB), an unweighted diversity-in-boards index (UW_DiB), a weighted diversity-of-boards index (W_DoB), and a weighted diversity-in-boards index (W_DiB).

The unweighted board diversity indices (UW_DoB and UW_DiB) are constructed based on the guidance provided by Hafsi and Turgut (2013). The diversity indices combine several attributes of the board either relating to the structure (DOB) or relating to directors in the board (DIB), with equal weights assigned to them. Since assigning equal importance to each attribute is hypothetical (Ben-Amar et al. 2013), this study constructs two additional board diversity indices that are weighted (W_DoB and W_DiB). The weights are based on the responses received from a survey questionnaire answered by listed firms' executives.

4.5.1 Unweighted diversity-of-boards index

This study includes four structural attributes relating to the board, to construct the diversity-of-boards indices. Table 1 describes these measures.

Table 1. Description and composition of independent variables (diversity indices).

Variables	Measurement
<i>Independent variables: diversity-of-boards indices</i>	
CEO/chair separation	0 if the chairperson also serves as the CEO and 1 otherwise.

Non-executive directors owning more than 5% of a firm's equity (blockholders)	1 if there is more than one non-executive director who also serves as a blockholder and 0 otherwise.
Representative directors' ownership Promoters	The percentage of state ownership represented by directors. The number of inside directors also serving as representative directors for government divided by the number of directors.

Independent variables: diversity-in-boards indices

Director gender	Using modified Blau's index with a classification of male and female directors.
Director age	Using modified Blau's index with a classification of five subgroupings: under 36 years, 36–45, 46–55, 56–65, and over 65.
Director education degree	Using modified Blau's index with a classification of four subgroupings: PhD, master's, bachelor's and others.
Director nationality	Using modified Blau's index with a classification of foreign and domestic directors.

This study constructs UW_DoB using the cluster analysis method (Han and Kamber 2006) as employed in previous studies (Deza and Deza 2009, Hafsi and Turgut 2013). This measurement represents dissimilarity among firm boards using the structural attributes of the board, and shows the extent to which all four structural attributes of the board in a given firm board are dissimilar from those of other firm boards in the sample.

Three main steps are used to ascertain the extent to which a board is dissimilar from the remaining boards. First, a matrix is developed by measuring the dissimilarity between a given firm and other firms, for each structural attribute of the board. Second, the extent of dissimilarity between a given firm and the other firms on all structural attributes (i.e., four attributes in this study) of the board is calculated. Third, the average dissimilarity between a given firm and the remaining firms in the sample is generated. This becomes the UW_DoB of the given firm.

The structural attributes of boards in this study contain binary and ratio scale data types. Han and Kamber (2006) have shown how to measure inter-sample differences with different data types, and their approach is accordingly used here to quantify the inter-sample differences. This method lumps together several attributes in a single dissimilarity matrix and uses a standardized range with differences from 0 to 1 for all the attributes. Each attribute in a given firm is measured and compared to the same attribute in the remaining firms in the

sample. If the measurement value is different, then that attribute value is recorded as different, and receives a score of more than zero; otherwise it is zero. Each attribute in a given firm is compared in this way. A higher scale represents higher diversity-of-boards. The details of this method are given in the Appendix.

4.5.2 Unweighted diversity-in-boards index

Table 2 describes the measurement of four demographic attributes of the board of directors to illustrate how demographic attributes are diverse among directors within a board representing a firm (gender, age, educational qualifications, and nationality). Each of these attributes is first measured using Blau's index (1977). Blau's index is recommended as an optimal method to measure dissimilarities within a group (Harrison and Klein 2007). This index is computed as follows:

$$1 - \sum (p_n^2) \quad (2)$$

where $n = 1, \dots, N$ possible categories, and p is the percentage of members of the board of directors in the n^{th} category. When Blau's index gains a large value, diversity-in-boards increases. However, in order to obtain a standardized range from zero to unity for all demographic diversity attributes, the method introduced by Agresti and Agresti (1978) is used. In this method, Blau's index is multiplied by $N/(N-1)$ to create what is termed a modified Blau's index. Then, to construct UW_DiB, the sample is split into terciles for each attribute to rank the levels of diversity (Ben-Amar et al. 2013, Hafsi and Turgut 2013). These groups then take values of 0 for the first tercile, 1 for the second, and 2 for the third. Finally, UW_DiB is the sum of all the ranked attributes that are involved in the demographic diversity within a board for each firm, such that a higher value represents a higher diversity-in-boards.

4.5.3 Weighted diversity-of-boards and weighted diversity-in-boards indices

This study constructs a weighted diversity-of-boards index (W_DoB) and weighted diversity-in-boards index (W_DiB) similar to UW_DoB and UW_DiB, using each attribute relating to the board structure and to directors within a board. These attributes are weighted based on executives' perceptions on their relative importance (Dess and Davis 1984, Van der Walt et al. 2006).³ The corporate executives of Vietnamese listed firms have an experiential understanding of how keen the directors in a board are to enhance the quality of earnings and CSD. Hence, the survey asked executives to assign a value to each attribute of directors within a board towards impacting on CSD of their firm. Each attribute is assigned a value ranging from zero (unimportant) to 10 (most important). The questionnaire was sent to 150 executives of all the firms in the sample. There were 80 usable responses, representing 53.33% of the sample.

This study calculates $\delta_{ij}^{(f)}$ in Equation (3) for each attribute to construct a weighted diversity-of-boards index (W_DoB) for each firm using the following formula:

$$\delta_{ij}^{(f)} = \frac{p * MEANRATING_f}{\sum_{f=1}^p MEANRATING_f} \quad (3)$$

where $\delta_{ij}^{(f)}$ is the indicator of attribute f weighted; p is the number of attributes f ; and MEANRATING is the mean importance rating of each attribute f based on executives' perceptions in the survey. Equation (3) is then used with $\delta_{ij}^{(f)}$ modified to measure W_DoB of each firm board.

Each attribute is measured as the mean score from the questionnaire survey. It is then used to measure the weighted diversity-in-boards index (W_DiB) for that firm. The W_DiB is calculated as the sum of all four ranked attributes, and each ranked attribute is multiplied by the mean value of importance rating obtained from the survey. A higher value represents a higher diversity-in-boards in that firm.

4.6 Control variables

This study controls for the firm characteristics return on assets (ROA), auditors (AUDIT), state ownership (STATE), foreign ownership (FOREIGN), and stock exchange location (STOCK_EX), which have been shown to influence CSD (Cormier et al. 2011, Purushothaman et al. 2000, Vu et al. 2011, Vu 2012). Although CSD can vary widely across industries (Mahadeo et al. 2011), the study does not control for industry type because the business activities of most Vietnamese listed firms are conducted in multiple industry sectors, and at present there are no norms for distinct industry classifications of listed firms in Vietnam (Nguyen 2012). The description of the control variables is given in Table 5.

4.7 Empirical models: The effects of board diversity on CSD

The first and second hypotheses, which examine the impact of board diversity on CSD, are tested using the following two regression functions:

$$CSD_i = \alpha_0 + \alpha_1 DoB_i + \sum \gamma_{j,i} control\ variables_i + \varepsilon_i \quad (4)$$

$$CSD_i = \beta_0 + \beta_1 DiB_i + \sum \eta_{j,i} control\ variables_i + \varepsilon_i \quad (5)$$

where CSD_i = firm i 's stakeholder-driven, three-dimensional CSD index; DoB_i = firm i 's indices of diversity-of-boards; DiB_i = firm i 's indices of diversity-in-boards; $i = 1, \dots, n$ firms.

4.8 The sample

This study examines the 2010 annual reports to capture the quantity and quality of CSD of Vietnamese listed firms. The 2010 year was chosen in this study because on 15 January 2010, the Ministry of Finance in Vietnam issued the Circular 09/2010/TT-BT Guidance for Information Disclosure on Stock Exchange with the aim of providing guidance to enhance the disclosure practices of Vietnamese listed firms. The results of this study can help the Ministry of Finance form a better understanding of listed firms' CSD practices to revise and upgrade this Circular for guidance on CSD. The sample was based on the 150 firms listed on the Ho Chi Minh stock exchange (HOSE) and Hanoi stock exchange (HNX) in 2010 that had been listed for the three-year period from 2008 to 2010, and that were not banks or financial

institutions. The three-year criterion was adopted in this study to avoid newly listed firms as these firms may be less representative in terms of CSD (Lim et al. 2007). The necessary data for board diversity, CSD, and information about control variables was hand-collected from the 2010 annual reports. Because annual reports proved were not to be available for 17 of those firms, the final sample contained 133 firms.

The annual reports were retrieved from HOSE and HNX websites as well as firm websites. Firms in the finance sector operate under a tight regulatory environment and are subject to various other disclosure requirements. Several previous CSR studies have excluded finance firms when analyzing non-finance firms (Haji 2013, Haniffa and Cooke 2005). Hence, banks and financial institutions are excluded.

4. Results

Table 2 shows the response rate to the different versions of the questionnaire; the average response rate was 60%.

Table 2. Response rate of target groups.

Respondents	Distributed questionnaires	Completed questionnaires	Response rate (%)
Local communities (society aspects)	350	243	69.43
Customers (product aspects)	270	158	58.52
Employees (labor aspects)	270	164	60.74
Lawyers and regulators (human rights aspects)	190	87	45.79
Total	1080	652	60.37

Table 3 shows the score distribution of 80 executives' perceptions regarding the attributes of board diversity. The mean scores vary between 5.13 (gender diversity) and 7.93 (nationality diversity), with the lowest being zero and the highest being 10.

Table 3. Descriptive statistics for the importance rating based on executives' perspectives about the board of directors' attributes in relation to CSD.

Importance rating	Max	Min	Mean	SD
<i>Structural attributes</i>				
CEO/chair separation	10	5	7.53	1.73
% Representative directors' ownership	9	5	7.13	1.25
% Promoters	10	3	6.47	1.85
Non-executive directors owning > 5% of a firm's equity	9	0	6.33	2.44
<i>Demographic attributes</i>				
Gender diversity	8	0	5.13	2.36
Age diversity	8	0	5.87	2.29
Educational qualifications diversity	10	5	7.60	1.35

5.1 Labor aspect (LA)

Panel A of Table 4 shows the ratings awarded by employees to the various reporting items concerning the labor aspect (LA). The highest mean score for those reporting items is 7.47 and the lowest is 6.44, out of a maximum possible score of 10 (column 2). In analyzing the disclosure types (columns 3 to 6) for the 15 reporting items (LA1 to LA15) for the labor aspect, employee respondents rated the highest scores, which are printed in bold in the Table, for items with numerical disclosures (9 items), i.e., LA2, LA3, LA15, LA4, LA5, LA7, LA9, LA13, and LA14, and for the reporting items with both monetary and numerical disclosures (6 items), i.e., LA1, LA6, LA8, LA10, LA11, and LA12. Meanwhile, the lowest scores, printed in italics in the table, were given to the items with monetary disclosures (11 items), i.e., LA2, LA3, LA15, LA4, LA5, LA7, LA8, LA9, LA12, LA13, and LA14, and the items with narrative disclosures (4 items), i.e., LA1, LA6, LA10, and LA11.

5.2 Human rights (HR) aspect

Table 4, Panel B, provides the ratings awarded by lawyers and regulators for the various information items on the human rights aspect (HR). The highest mean score for the information items is 8.19 and the lowest is 6.38 (column 2). Relating to the disclosure types (columns 3 to 6), out of 11 items (HR1 to HR11) in the human rights aspect, lawyers and regulators assigned the highest scores to the items with numerical disclosures (9 items), and to the items with both monetary and numerical disclosures (2 items). The items with narrative disclosures (10 items) and the items with monetary disclosures (1 item) received the lowest scores.

5.3 Societal (SO) aspect

Table 4, Panel C, presents the ratings assigned by the members of local communities to the various reporting items concerning the societal aspect (SO). The highest mean score for the reporting items is 7.92 and the lowest is 6.22 (column 2). Relating to the disclosure types

(columns 3 to 6), out of 10 items (SO1 to SO10) in the societal aspect, local communities assigned the highest scores for all 10 items with both monetary and numerical disclosures. They assigned the lowest mean scores scores to all 10 items with narrative disclosures.

5.4 Product (PR) aspect

Table 4, Panel D, shows the ratings awarded by customers for the various reporting items about the product aspect (PR). The highest mean score for the reporting items is 8.08 and the lowest is 6.62 (column 2). Relating to the disclosure types (columns 3 to 6), out of 9 items (PR1 to PR9) in the product aspect, customers assigned the highest scores for items with both monetary and numerical disclosures (8 items), and one item with narrative disclosure. They assigned the lowest scores to the items with narrative disclosures (5 items), monetary disclosures (3 items), and one item with numerical disclosure.

Table 4. List of 45 items with the mean importance weighted by four stakeholder-specific groups for disclosure items and types, in order of relative importance.

Panel A: List of 15 labor items and the mean importance weighted by employees for disclosure items and types.

Labor items (LA)	Mean weight of items disclosed	Mean weight of each type of disclosure			
		Narrative	Monetary	Numerical	Both monetary and numerical
(1)	(2)	(3)	(4)	(5)	(6)
LA11	7.47	6.53	6.75	6.92	7.51
LA7	7.38	6.28	6.00	7.17	7.06
LA8	7.29	6.49	6.31	7.02	6.97
LA4	7.28	6.22	5.99	7.19	6.92
LA5	7.28	6.34	5.99	7.09	6.84
LA9	7.27	6.54	6.37	7.06	6.88
LA3	7.18	6.15	7.00	7.19	7.68
LA2	7.15	6.03	5.85	6.92	6.69
LA12	7.11	6.65	6.10	7.10	7.12
LA10	7.05	6.20	6.02	6.94	6.90
LA1	6.97	5.77	5.85	7.04	7.27
LA14	6.78	5.84	6.35	6.74	7.16
LA15	6.7	5.73	5.69	6.88	6.90
LA6	6.47	5.94	5.60	6.69	6.34
LA13	6.44	5.97	5.27	6.53	6.26

Panel B: List of 11 human right items and the mean importance weighted by lawyers and regulators for disclosure items and types

Human rights items (HR)	Mean weight of items disclosed	Mean weight of each type of disclosure			
		Narrative	Monetary	Numerical	Both monetary and numerical

(1)	(2)	(3)	(4)	(5)	(6)
HR7	8.19	5.27	5.90	7.90	6.64
HR11	7.98	5.19	6.00	7.52	7.36
HR4	7.9	5.28	5.25	7.64	6.78
HR6	7.89	5.43	6.07	7.89	7.21
HR5	7.28	4.91	5.23	6.99	6.32
HK9	7.19	5.26	5.62	6.79	6.61
HR3	7.18	4.62	5.64	7.03	6.82
HR8	6.93	5.53	5.83	6.96	6.53
HR10	6.71	4.87	5.17	6.45	6.41
HR1	6.69	4.71	6.01	7.05	7.68
HR2	6.38	4.55	5.30	6.75	6.97

Panel C: List of 10 society items and the mean importance weighted by local communities for disclosure items and types

Society items (SO)	Mean weight of items disclosed	Mean weight of each type of disclosure			
		Narrative	Monetary	Numerical	Both monetary and numerical
(1)	(2)	(3)	(4)	(5)	(6)
SO2	7.92	4.91	6.35	6.50	7.58
SO8	7.81	5.49	6.98	6.99	7.90
SO1	7.67	4.61	6.53	6.04	7.97
SO10	7.52	5.06	5.87	6.22	7.43
SO4	7.41	5.11	6.10	6.55	7.55
SO7	7.35	5.45	6.12	6.36	7.38
SO9	7.26	4.79	5.58	6.09	7.32
SO3	7.24	5.06	5.74	6.57	7.34
SO6	6.94	4.88	6.21	6.09	7.33
SO5	6.22	4.88	5.46	5.73	6.44

Panel D: List of 9 product items and the mean importance weighted by customers for disclosure items and types

Product items (PR)	Mean weight of items disclosed	Mean weight of each type of disclosure			
		Narrative	Monetary	Numerical	Both monetary and numerical
(1)	(2)	(3)	(4)	(5)	(6)
PR1	8.08	5.22	6.14	6.58	7.68
PR5	8.07	6.30	6.17	7.08	7.76
PR9	7.8	5.61	6.56	6.70	8.09
PR8	7.77	5.97	6.02	6.64	7.11
PR3	7.71	5.88	5.43	6.09	6.74
PR7	7.64	5.56	5.62	6.49	7.35
PR6	6.98	6.05	5.68	5.60	5.89
PR2	6.94	5.57	5.63	6.21	6.53
PR2	6.62	5.59	5.28	5.57	6.13

5.5 Descriptive statistics

Table 5 presents the descriptive statistics for the variables used to analyze the impact of board diversity on CSD in the sample of 133 Vietnamese listed firms. The CSD score

(CSD_INDEX) ranges from 3 percent to 23 percent with a mean of 10 percent, which reveals that the CSD score of listed firms in the sample is low. This is because CSD practices are relatively new in Vietnam (Vu et al. 2011). Our result is consistent with Vu et al.'s (2011) examination of the quantity of voluntary disclosure, including social disclosure in Vietnam.

UW_DoB has a range between 0.23 and 0.49, and W_DoB has a range between 0.24 and 0.49. The mean values are 0.30 and 0.31, respectively. The range for UW_DiB is between zero and seven, and its mean value is 3.00. The range for W_DiB is between zero and 47.19 and its mean value is 18.6. The mean values of UW_DiB and W_DiB indicate that diversity-in-boards in the sample is quite low.

Related to the control variables, only 21 (16 percent) of the 133 firms in the sample use the Big Four auditing firms. The mean of ROA is 0.08, which is similar to the 0.07 found by Vu et al. (2011) for a sample of 45 Vietnamese listed firms in 2008. The Ho Chi Minh stock exchange includes 90 (68 percent) of the 133 listed firms in the sample. Because foreign ownership is limited to 49 percent in Vietnamese listed firms governed by Vietnamese law, the average percentage of foreign ownership (FOREIGN) in this sample is quite low, 12 percent, with a range of 0 to 49 percent. The average percentage of state ownership (STATE) is 27 percent with a range of 0 to 79.07 percent.

Table 5. Descriptive statistics.

Variables	Mean	SD	Min	Max	P25	P50	P75
<i>Dependent variables</i>							
CSD_INDEX	0.10	0.05	0.03	0.23	0.07	0.09	0.12
<i>Dependent variables – Additional analysis</i>							
LAD_INDEX	0.17	0.08	0.03	0.41	0.12	0.18	0.22
SOD_INDEX	0.04	0.05	0.00	0.23	0.00	0.04	0.07
PRD_INDEX	0.16	0.05	0.10	0.30	0.10	0.14	0.20
HRD_INDEX	0.01	0.04	0.00	0.25	0.00	0.00	0.00
<i>Independent variables</i>							
UW_DoB	0.31	0.07	0.23	0.49	0.24	0.30	0.35
W_DoB	0.32	0.07	0.24	0.49	0.25	0.31	0.36
UW_DiB	2.91	1.71	0.00	7.00	2.00	3.00	4.00
W_DiB	18.75	11.27	0.00	47.19	10.26	18.60	26.94
<i>Structural attributes of the board of directors to construct DoB_Index</i>							
CEO/chair separation	0.62	0.49	0.00	1.00	0.00	1.00	1.00
% Representative directors' ownership	0.22	0.23	0.00	0.85	0.00	0.19	0.40
% Promoters	0.13	0.20	0.00	0.86	0.00	0.00	0.20
Non-executive directors owning > 5% of a firm's equity	0.14	0.35	0.00	1.00	0.00	0.00	0.00

<i>Demographic attributes of the board of directors measured by the modified Blau's index to construct DiB_Index</i>							
Gender diversity	0.38	0.38	0.00	0.98	0.00	0.49	0.64
Age diversity	0.64	0.20	0.00	0.92	0.59	0.70	0.80
Educational qualifications diversity	0.41	0.26	0.00	0.93	0.29	0.43	0.64
Nationality diversity	0.08	0.23	0.00	1.00	0.00	0.00	0.00
<i>Control variables</i>							
AUDIT	0.16	0.37	0.00	1.00	0.00	0.00	0.00
ROA	0.08	0.08	-0.17	0.39	0.03	0.07	0.11
STOCK_EX	0.68	0.47	0.00	1.00	0.00	1.00	1.00
FOREIGN	0.12	0.14	0.00	0.49	0.02	0.05	0.17
STATE	0.27	0.21	0.00	0.79	0.07	0.28	0.50

The final sample consists of 133 firms listed on HOSE and HNX for 2010. CSD_INDEX = the stakeholder-driven, three-dimensional CSD index; UW_DoB = the unweighted index of diversity-of-boards; W_DoB = the weighted index of diversity-of-boards; UW_DiB = the unweighted index of diversity-in-boards; W_DiB = the weighted index of diversity-in-boards; AUDIT = 1 if firm's auditor is a Big Four and otherwise 0; ROA = net profit over the total assets; STOCK_EX = 1 if the firms listed on HOSE and 0 for firms listed on HNX; FOREIGN = the percentage of shareholding owned by foreign investors; STATE = the percentage of shareholding owned by the state.

Table 6 shows the pairwise correlations between all combinations of variables. UW_DoB and W_DoB are positively correlated with a coefficient of 0.997, and UW_DiB is positively correlated with W_DiB ($r = 0.988$). This study therefore undertakes the task of empirically confirming whether UW_DoB and W_DoB, or UW_DiB and W_DiB, have a similar influence on CSD. As expected, the two measures of UW_DiB and W_DiB are positively correlated with CSD_INDEX (coefficients of 0.264 and 0.258, respectively), while both UW_DoB and W_DoB show no significant correlations.

Table 6. Pairwise correlations.

	1	2	3	4	5	6	7	8	9	10
1 CSD_INDEX	1.000									
2 UW_DoB	0.140	1.000								
3 W_DoB	0.147	0.997	1.000							
4 UW_DiB	0.264	-0.036	-0.035	1.000						
5 W_DiB	0.258	-0.036	-0.037	0.988	1.000					
6 AUDIT	0.286	0.145	0.152	0.011	0.042	1.000				
7 ROA	0.183	-0.059	-0.051	0.062	0.054	0.045	1.000			
8 STOCK_EX	0.344	0.078	0.077	0.199	0.201	0.167	0.108	1.000		
9 FOREIGN	0.187	-0.049	-0.051	0.204	0.238	0.221	0.450	0.365	1.000	
10 STATE	-0.049	0.015	0.026	-0.374	-0.371	0.179	0.099	-0.250	-0.179	1.000

*Bold text indicates significance at the 10% level or better. Please see note below Table 5 for description of each variable. Although UW_DoB is significantly positively correlated with CSD_INDEX with a coefficient of 0.147, the p-value is 0.092 (not tabulated).

5.6 Checking for multicollinearity and heteroscedasticity

This study checks the variance inflation factor (VIF) for the regression analysis and finds that the maximum VIF is 1.59, which is less than 10, for all the regression models. Therefore, multicollinearity does not influence the empirical models tested in this study (Gujarati and Porter 2009). To avoid the problem of heteroscedasticity (where observations have variable residual values), robust standard error (White 1980) is employed to investigate the impact of board diversity indices (UW_DoB, W_DoB, UW_DiB, and W_DiB) on CSD (CSD_INDEX).

5.7 Results of hypothesis tests

Table 7 provides the findings of the tests of hypotheses 1 and 2 where CSD_INDEX is the dependent variable, and UW_DoB, W_DoB, UW_DiB, and W_DiB are the alternate independent variables. The table shows that both UW_DoB and W_DoB are not related to CSD_INDEX (p-values of 0.318 and 0.298 respectively), which rejects hypothesis 1.

Meanwhile, the coefficient estimates of both UW_DiB and W_DiB are positive and significant (p-values of 0.010 and 0.014, respectively), indicating that firms with greater diversity-in-boards have a positive influence on higher CSD, confirming hypothesis 2.

Table 7. Board diversity (unweighted and weighted indices) and CSD.

	CSD_INDEX	CSD_INDEX	CSD_INDEX	CSD_INDEX
UW_DoB	0.057 (0.318)			
W_DoB		0.062 (0.298)		
UW_DiB			0.006*** (0.010)	
W_DiB				0.001** (0.014)
AUDIT	0.030** (0.013)	0.030** (0.013)	0.030*** (0.004)	0.030*** (0.005)
ROA	0.101** (0.023)	0.100** (0.023)	0.093* (0.072)	0.097* (0.062)
STOCK_EX	0.028*** (0.000)	0.028*** (0.000)	0.027*** (0.002)	0.027*** (0.001)
FOREIGN	-0.017 (0.605)	-0.017 (0.612)	-0.026 (0.400)	-0.029 (0.352)
STATE	-0.010 (0.568)	-0.011 (0.563)	0.006 (0.742)	0.005 (0.786)
Constant	0.056*** (0.002)	0.054*** (0.005)	0.054*** (0.000)	0.055*** (0.000)
R ²	0.204	0.205	0.238	0.233
Adj- R ²	0.166	0.167	0.201	0.197
F statistic	6.29***	6.33***	6.82***	6.76***
p-value	0.000	0.000	0.000	0.000

Mean VIF	1.26	1.26	1.31	1.31
----------	------	------	------	------

The p-values are in parentheses, calculated using standard errors corrected for heteroscedasticity. Statistical significance is indicated by ***, **, and * for 1%, 5%, and 10%. Please see note below Table 5 for description of each variable.

The results for the control variables shown in Table 6 illustrate a positive and significant association (p-values < 0.05) between AUDIT and CSD_INDEX, which suggests that firms audited by the Big Four auditing firms tend to make more CSD, which is consistent with prior studies (Craswell 1992, Inchausti 1997, Uwuigbe and Egbide 2012). ROA shows positive and significant coefficients (p-values < 0.10), which suggests that firms that perform better financially are associated with more CSD, which is consistent with the literature (Khan et al. 2013, Lu and Abeysekera 2014, Haniffa and Cooke 2005). The STOCK_EX is positively and significantly (p-values < 0.01) associated with CSD_INDEX, which indicates that firms listed on HOSE engage in significantly higher CSD than firms listed on HNX. This is consistent with Vu (2012) who examines the factors impacting on voluntary disclosure in Vietnamese listed firms. FOREIGN and STATE are not significantly related to CSD, as in prior studies (Haniffa and Cooke 2005, Lu and Abeysekera 2014).

5. Additional analysis and robustness tests

6.1 Board diversity and corporate social disclosure across four social aspects

To provide further insight, this study analyses the relationships between board diversity and CSD across four social aspects in the GRI 3.1 framework. These are labor practices, human rights, society, and product responsibility. As is shown in Table 5, information related to labor practices (LAD_INDEX) and product responsibility (PRD_INDEX) items is disclosed the most, with a mean value of 0.17 and 0.16, respectively. A minimum score of 0 for society (SOD_INDEX) and human rights (HRD_INDEX) aspects suggests that some firms do not disclose any information about their society and human rights aspects; in fact, of the 133 firms in the sample, only 18 firms (13.5%) disclose the human rights aspect, 74 firms (55.6%)

disclose the society aspect, while all firms (133 firms or 100%) in the sample disclose the labor and product responsibility aspects.

Following Firth (1979) in omitting firms which definitely do not have any items to disclose, this study examines the impact of board diversity on society aspect disclosure for only the 74 listed firms that disclose the society aspect, whereas it assesses the impact of board diversity on labor aspect disclosure and on product responsibility aspect disclosure for 133 listed firms (full sample). Because only 18 firms disclose the human rights aspect, which does not provide an adequate sample size for regression modeling, the human rights disclosure aspect is not analyzed here. The regression is repeated by replacing CSD_INDEX in the models reported in Table 7 with the score of each of three aspects, i.e., labor practices (LAD_INDEX), product responsibility (PRD_INDEX), and society (SOD_INDEX) as the dependent variable. Because almost identical results are obtained by using either the unweighted or weighted index to measure board diversity, for brevity this study only presents the results using weighted indices of diversity-of-boards and diversity-in-boards. Other results are available upon request.

1 Table 8 shows that the regression results are consistent with the results of CSD_INDEX
 2 reported in Table 7. The results for the disclosure of labor practices (LAD_INDEX), product
 3 responsibility (PRD_INDEX), and society (SOD_INDEX) indicate that diversity-of-boards
 4 (W_DoB) does not significantly influence the defined aspects of social disclosure. The
 5 diversity-in-boards (W_DiB) significantly (p-values < 0.05) and positively influences the
 6 defined aspects of social disclosure.

7 **Table 8. Board diversity and CSD across three social aspects**

	LAD_INDEX	LAD_INDEX	PRD_INDEX	PRD_INDEX	SOD_INDEX	SOD_INDEX
W_DoB	0.069 (0.508)		0.007 (0.920)		0.073 (0.317)	
W_DiB		0.001** (0.049)		0.001** (0.019)		0.001*** (0.004)

AUDIT	0.026 (0.178)	0.025 (0.157)	0.035** (0.013)	0.034** (0.022)	0.010 (0.430)	0.009 (0.478)
ROA	0.164* (0.070)	0.159* (0.078)	0.077 (0.143)	0.074 (0.161)	0.130 (0.137)	0.128 (0.103)
STOCK_EX	0.028* (0.059)	0.027* (0.051)	0.035*** (0.002)	0.034*** (0.002)	0.033*** (0.000)	0.031*** (0.003)
FOREIGN	0.016 (0.778)	-0.001 (0.992)	-0.033 (0.352)	-0.043 (0.244)	-0.023 (0.590)	-0.036 (0.368)
STATE	-0.008 (0.807)	0.015 (0.641)	-0.026 (0.255)	-0.009 (0.703)	-0.003 (0.918)	0.018 (0.519)
Constant	0.112*** (0.002)	0.107*** (0.000)	0.131*** (0.000)	0.113*** (0.000)	0.016 (0.555)	0.015 (0.400)
R ²	0.101	0.123	0.176	0.208	0.137	0.212
Adjusted R ²	0.058	0.081	0.137	0.170	0.059	0.142
F statistic	2.48**	2.95***	5.64***	7.18***	3.06***	3.21***
p-value	0.027	0.010	0.000	0.000	0.010	0.008
Obs	133	133	133	133	74	74

8 The p-values are in parentheses, calculated using standard errors corrected for heteroscedasticity. Statistical
9 significance is indicated by ***, **, and * for 1%, 5%, and 10%. Please see below Table 5 for description of
10 each variable.

11 **6.2 Alternative regression specifications**

12 In the primary analysis, this study measures diversity-in-boards indices (both weighted and
13 unweighted) through the terciles split method. An additional analysis is carried out to ensure
14 that the primary analysis is robust, and this study tests diversity-in-boards and CSD models by
15 using median and quartile values alternately to measure diversity-in-boards indices. These
16 values are used to rank firms' levels of diversity-in-boards (Ben-Amar et al. 2013, Hafsi and
17 Turgut 2013), and those ranks become the diversity-in-board observed in firms. Specifically,
18 the median split method categorizes each demographic attribute into two groups, taking 1 if
19 every value is above the median, otherwise 0. The quartile split method categorizes each
20 demographic attribute into four groups, taking 0 for the first quartile (below 25%), 1 for the
21 second quartile (between 25.1% and 50%), 2 for the third quartile (between 51% and 75%),
22 and 3 for the fourth quartile (above 75%). Those results are similar and more significant in the
23 median split method (Table 9). In addition, the results are cross checked using the return on
24 equity (ROE), which measures financial performance, instead of ROA, and the results do not
25 change (Table 9).

26 **Table 9. Diversity-in-boards (median and quartile split methods) and CSD**

	CSD_INDEX	CSD_INDEX	CSD_INDEX	CSD_INDEX
UW_DiB (<i>median split method</i>)	0.010*** (0.008)			
W_DiB (<i>median split method</i>)		0.002*** (0.010)		
UW_DiB (<i>quartile split method</i>)			0.004*** (0.010)	
W_DiB (<i>quartile split method</i>)				0.001** (0.018)
AUDIT	0.028*** (0.009)	0.027** (0.011)	0.027** (0.011)	0.027** (0.015)
ROE	0.058** (0.030)	0.058** (0.028)	0.053** (0.046)	0.053** (0.047)
STOCK_EX	0.029*** (0.000)	0.030*** (0.000)	0.028*** (0.000)	0.028*** (0.000)
FOREIGN	-0.018 (0.589)	-0.021 (0.534)	-0.020 (0.540)	-0.022 (0.520)
STATE	0.008 (0.664)	0.008 (0.653)	0.010 (0.579)	0.009 (0.626)
Constant	0.013 (0.571)	0.013 (0.575)	0.034** (0.036)	0.037** (0.024)
R ²	0.2362	0.2355	0.236	0.2295
Adjusted R ²	0.1998	0.1991	0.1996	0.1928
F statistic	7.01***	6.99***	6.63***	6.53***
p-value	0.000	0.000	0.000	0.000
Mean VIF	1.25	1.25	1.27	1.28

27 The p-values are in parentheses, calculated using standard errors corrected for heteroscedasticity. Statistical
 28 significance is indicated by ***, **, and * for 1%, 5%, and 10%. Please see below Table 5 for description of
 29 each variable.

30 **6. Discussion**

31 The results are consistent with an earlier study by Hafsi and Turgut (2013) who report a
 32 positive association between diversity-in-boards and social performance and find no such
 33 relationship between diversity-of-boards and social performance. Additionally, it has been
 34 shown elsewhere that the structural attributes of a board such as outside directors (Haniffa and
 35 Cooke 2002, Hossain and Reaz 2007, Michelon and Parbonetti 2012), board leadership
 36 structure (Barako et al. 2006, Haniffa and Cooke 2002, Khan et al. 2013, Michelon and
 37 Parbonetti 2012), and directors' ownership (Hafsi and Turgut 2013) do not affect voluntary
 38 disclosure or social and environmental disclosure. Based on agency theory, diversity-of-

39 boards is identified with structural attributes and therefore represents the recommended
40 governance ‘best practices’. Structural attributes of the board can help to align managers’
41 interests with shareholders’ interests (Fama 1980, Fama and Jensen 1983). Thus, diversity-of-
42 boards may have only an indirect influence on social disclosure (Hafsi and Turgut 2013).

43 Also, prior studies document a positive relationship between disclosure (such as social
44 and environmental disclosure or voluntary disclosure) and demographic attributes of the
45 board of directors such as gender diversity (Bear et al. 2010, Fernandez-Feijoo et al. 2012,
46 Post et al. 2011) and education diversity (Akhtaruddin and Abdur Rouf 2011). Based on
47 resource dependence theory, members of the board of directors are key strategic resources for
48 an organization and contribute to CSD. The demographic differences of directors are likely to
49 support an organization’s external legitimacy and to enhance the relations between the
50 organization and relevant stakeholders, and therefore diversity-in-boards has a positive impact
51 on CSD.

52

53 **7. Implications**

54 **8.1 Implications for theory**

55 The board of directors provides two key functions: it monitor managers’ discretion on behalf
56 of the shareholders, as underpinned by agency theory, and provides important resources to the
57 firm, as underpinned by resource dependency theory (Hillman and Dalziel 2003, Jackling and
58 Johl 2009). The findings in this study show that the impact of diversity-of-boards on CSD is
59 not supported by agency theory, while resource dependency theory supports the impact of
60 diversity-in-boards on CSD.

61 **8.2 Implications for methodology**

62 Previous studies have mostly considered the individual attributes of the demographic or/and
63 structural attributes of boards when examining their diversity. Those studies seldom combine
64 the attributes. Two studies (Ben-Amar et al. 2013, Hafsi and Turgut 2013) combine the

65 demographic attributes into a demographic diversity index, and the structural attributes into a
66 structural diversity index. They assume that all the attributes are equally important. This study
67 however makes no such assumptions. It first examines the attributes by assuming that they are
68 all equally important (unweighted), and then examines the attributes by including firms'
69 executives' perceptions about each of the attributes (weighted). A questionnaire provides
70 executives' perceptions on various attributes relating to board diversity to determine their
71 importance. A comparison of results between weighted and unweighted methods enables the
72 potential impact of the perceived importance of attributes relating to the diversity-in-boards
73 and diversity-of-boards and their relationships with CSD to be investigated.

74 Additionally, mainstream research has also focused on the quantity of disclosure
75 measured by a dichotomous score (Ho and Wong 2001, Vu 2012, Xiao and Yuan 2007). Little
76 empirical evidence measures the disclosure quality or measures the combined disclosure
77 quantity and disclosure quality (Haji 2013). This study extends the literature by constructing a
78 CSD index that combines disclosure quantity and two aspects of disclosure quality perceived
79 by four socially relevant stakeholder groups, rather than managers or miscellaneous
80 stakeholder perspectives (Haji 2013, McNally et al. 1982, Saleh et al. 2010).

81 **8.3 Implications for practice**

82 Based on the survey of different stakeholders, the findings of this study benefit a range of
83 interest groups. Corporate executives, who take charge of preparing CSD, can find the results
84 useful in ascertaining how much and what social information to disclose to stakeholders. The
85 results also demonstrate the current CSD practices of Vietnamese listed firms and
86 stakeholders' perceptions about CSD. Regulators will benefit from a better understanding of
87 Vietnamese firms' CSD practices, to improve the current guidelines on the CSD of
88 Vietnamese listed firms, issued on 15 January 2010 by the Ministry of Finance in its Circular
89 "Guidance for Information Disclosure on Stock Exchange." The year used in the study, 2010,
90 was specifically chosen to best fit this purpose. Although the sample size used in this study is

91 just 133 firms, which appears small in the context of large western stock exchanges, in the
92 smaller Vietnamese stock exchange context it is in fact representative.

93 **8. Conclusions**

94 Investigating the influence of board diversity on CSD of 133 Vietnamese listed firms in 2010,
95 the findings reject the first hypothesis, that higher diversity-of-boards leads to higher CSD,
96 showing that diversity-of-boards indices (both unweighted and weighted) do not significantly
97 influence the CSD index. Meanwhile, the results support hypothesis 2 which states that
98 greater diversity-in-boards leads to higher CSD. This study also confirmed that weighted and
99 unweighted board diversity indices had a similar influence on CSD. Although no prior studies
100 build weighted and unweighted board diversity indices to make a comparison with this study,
101 other studies that construct both weighted and unweighted disclosure indices in corporate
102 disclosure research also find no significant differences between these two indices (Barako et
103 al. 2006, Chow and Wong-Boren 1987, Haji 2013).

104 Annual reports are exclusively focused on in this study because they are considered to be
105 firms' most important public communication document. However, social disclosures could
106 also be provided in other ways such as press releases, the media, and the Internet, hence
107 future studies could explore the roles of other disclosure channels to examine firms' CSD.

108 ***Appendix.***

109 ***Method of measuring unweighted diversity-of-boards index (UW_DoB)***

110 First, the dissimilarity between a given firm and another firm is measured using a
111 mathematical distance function defined by Han and Kamber (2006) as follows:

$$112 \quad d(i, j) = \frac{\sum_{f=1}^p \delta_{ij}^{(f)} d_{ij}^{(f)}}{\sum_{f=1}^p \delta_{ij}^{(f)}} \quad (6)$$

113 where $d(i, j)$ is the dissimilarity between objects i and j (i.e., firm i and firm j); p is
114 represented as the number of structural attributes of the firm board examined in this study.
115 These two data points are represented as $(x_{i1}, x_{i2}, \dots, x_{ip})$ and $(x_{j1}, x_{j2}, \dots, x_{jp})$ respectively.

116 The indicator $\delta_{ij}^{(f)} = 1$ with the assumption that attributes f is equal weighted relative to the
 117 contribution.

118

119 Then, the contribution made by an attribute f to the dissimilar function between firm i and
 120 firm j (i.e., $d_{ij}^{(f)}$) is calculated. However, that computation is unique to each data type. As
 121 attributes are measured using different data types, $d_{ij}^{(f)}$ is calculated using different formulas
 122 based on the data type of the attribute. The structural attributes of boards in this paper contain
 123 binary and ratio scale data types, so the following formulas focus on these two data types:

124

125 (a). If attribute f is binary: $d_{ij}^{(f)} = 0$ if $x_{if} = x_{jf}$, or otherwise $d_{ij}^{(f)} = 1$;

126 (b). If attribute f is ratio scale, it is treated like an interval scale attribute with the following
 127 formula:

128
$$d_{ij}^{(f)} = \frac{|x_{if} - x_{jf}|}{\max_h x_{hf} - \min_h x_{hf}}$$
 where h runs over all non-missing objects for attribute f .

129 The contribution of dissimilarity for all the different attributes (i.e., $d_{ij}^{(f)}$) is normalized by
 130 these formulates, and hence expresses on a common scale from 0 to 1. The average distance
 131 (dissimilarity) to all the other boards is taken as follows (note that 1 is subtracted from the
 132 number of firms in the sample in the denominator of the formula because this study compares
 133 a firm with other firms without the firm being compared with itself, because such a
 134 comparison is meaningless):

135
$$D(i) = \frac{\sum_{j=1}^k d(i, j)}{k - 1} \quad (7)$$

136 where k is the number of firm boards; $D(i)$ is the average dissimilarity of firm board i to all
 137 other boards in the sample, namely UW_DoB of each firm board.

138 **An example of an unweighted diversity-of-boards index's calculation with four firms'**
 139 **data**

Firm board	CEO/chairperson separation (binary)	Representative directors' ownership (%) (ratio scale)	% Promoters (ratio scale)	Non-executive directors owning > 5% of a firm's equity (binary)
Firm	Attribute 1	Attribute 2	Attribute 3	Attribute 4
1	0	0	0	0
2	1	0.5726	0.6	0
3	0	0	0.25	0
4	0	0.1217	0.4	1

140 The dissimilarity function between firm i and firm j (i.e., $d_{ij}^{(f)}$) for each attribute f is computed
 141 in the dissimilarity matrix as follows:

$$142 \begin{bmatrix} 0 & & & \\ d_{1,2}^{(f)} & 0 & & \\ d_{1,3}^{(f)} & d_{2,3}^{(f)} & 0 & \\ d_{1,4}^{(f)} & d_{2,4}^{(f)} & d_{3,4}^{(f)} & 0 \end{bmatrix}$$

143 ***Binary scale data types (Attribute 1 and attribute 4)***

144 Because attributes 1 and 4 are binary, $d_{ij}^{(f)}$ becomes 0 if the attributes of firm board i and firm
 145 board j match, and 1 if the attributes differ. This study gained $d_{ij}^{(f)}$ for attribute 1 (i.e. $d_{i,j}^{(1)}$) in
 146 the dissimilarity matrix as follows.

$$147 \begin{bmatrix} 0 & & & \\ 1 & 0 & & \\ 0 & 1 & 0 & \\ 0 & 1 & 0 & 0 \end{bmatrix}$$

148 This study gained $d_{ij}^{(f)}$ for attribute 4 (i.e. $d_{i,j}^{(4)}$) in the dissimilarity matrix as follows:

149

$$\begin{bmatrix} 0 & & & \\ 0 & 0 & & \\ 0 & 0 & 0 & \\ 1 & 1 & 1 & 0 \end{bmatrix}$$

150

151 **Ratio scale data types (Attribute 2 and attribute 3)**

152 This illustration computes $d_{ij}^{(f)}$ for attributes 2 and 3 (which are ratio scales). In this scenario,

153 the data of each attribute is treated like an interval scale (see b) for the formula). To compute

154 $d_{ij}^{(f)}$ for attribute 2 (i.e. $d_{i,j}^{(2)}$), this study let $\max_{h}x_h = 0.5726$ and $\min_{h}x_h = 0$. The following

155 dissimilarity matrix is then obtained for attribute 2 (i.e. $d_{i,j}^{(2)}$):

156

$$\begin{bmatrix} 0 & & & \\ 1 & 0 & & \\ 0 & 1 & 0 & \\ 0.21 & 0.79 & 0.21 & 0 \end{bmatrix}$$

157 The figures shown in column 1 of the matrix for attribute 2 above (that is 0, 1, 0, 0.21) are

158 calculated as follows.

159 The dissimilarity score for attribute 2 for firm 1 compared with firm 1:

160 $d_{1,1}^{(2)} = 0$ (because there is no dissimilarity between firm 1 and itself).

161 The dissimilarity score for attribute 2 for firm 1 compared with firm 2:

162
$$d_{1,2}^{(2)} = \frac{|0 - 0.5726|}{0.5726 - 0} = 1$$

163 The dissimilarity score for attribute 2 for firm 1 compared with firm 3:

164
$$d_{1,3}^{(2)} = \frac{|0 - 0|}{0.5726 - 0} = 0$$

165 The dissimilarity score for attribute 2 for firm 1 compared with firm 4:

166
$$d_{1,4}^{(2)} = \frac{|0 - 0.1217|}{0.5726 - 0} = 0.21$$

167 Attribute 3 is also a ratio scale. As with calculating attribute 2, the $d_{ij}^{(f)}$ for attribute 3 (i.e. $d_{i,j}^{(3)}$)
 168) in the dissimilarity matrix is as follows (details of calculating individual figures are not
 169 shown here):

$$170 \quad \begin{bmatrix} 0 & & & \\ 1 & 0 & & \\ 0.42 & 0.58 & 0 & \\ 0.67 & 0.33 & 0.25 & 0 \end{bmatrix}$$

171

172 The dissimilarity matrices for the four attributes are computed using formula (1). For
 173 example, the dissimilarity between firm 1 and firm 4 ($d(1,4)$), for the combined four
 174 attributes, is obtained as follows (all four attributes are assumed to have equal weights, hence
 175 the indicator $\delta_{ij}^{(f)}$ is 1):

$$176 \quad d(1,4) = \frac{1*d_{1,4}^{(1)} + 1*d_{1,4}^{(2)} + 1*d_{1,4}^{(3)} + 1*d_{1,4}^{(4)}}{4} = \frac{1*0 + 1*0.21 + 1*0.67 + 1*1}{4} = 0.47$$

177

178 Similarly, the resulting dissimilarity matrix obtained for the data described by the four
 179 attributes of mixed types is:

$$180 \quad \begin{bmatrix} 0 & & & \\ d(1,2) & 0 & & \\ d(1,3) & d(2,3) & 0 & \\ d(1,4) & d(2,4) & d(3,4) & 0 \end{bmatrix} = \begin{bmatrix} 0 & & & \\ 0.75 & 0 & & \\ 0.10 & 0.65 & 0 & \\ 0.47 & 0.78 & 0.37 & 0 \end{bmatrix}$$

181

182 Finally, the diversity-of-boards index of each firm board is calculated based on formula (2),
 183 which is the average difference of a given firm with all other firms when the dissimilarity
 184 distance is measured.

185 For example, the UW_DoB of firm board 1 is:

$$186 \quad D(firm1) = \frac{d(1,1) + d(1,2) + d(1,3) + d(1,4)}{4-1} = \frac{0 + 0.75 + 0.1 + 0.47}{4-1} = 0.44.$$

187

188 Similarly, by using the above computations, the UW_DoB of firm board two, three, and four
189 are 0.73, 0.37, and 0.54, respectively. These results indicate that firm board 2 is the most
190 diverse (dissimilarity), while firm board 3 is the least diverse (dissimilarity).
191

192 **References**

- 193 Abeysekera, I. and Guthrie, J. 2005. 'An empirical investigation of annual reporting trends of
194 intellectual capital in Sri Lanka'. *Critical Perspectives on Accounting*, 16:3, 151-63.
- 195 Adams, C. A. 2002. 'Internal organisational factors influencing corporate social and ethical reporting:
196 Beyond current theorising'. *Accounting, Auditing & Accountability Journal*, 15:2, 223.
- 197 Aerts, W., Cormier, D. and Magnan, M. (2008). 'Corporate environmental disclosure, financial
198 markets, and the media: An international perspective'. *Ecological Economics*, 64:3, 643:659.
- 199 Agresti, A. and Agresti, B. F. 1978. 'Statistical Analysis of Qualitative Variation'. *Sociological*
200 *Methodology*, 9:Journal Article, 204-37.
- 201 Akhtaruddin, M. and Abdur Rouf, M. 2011. 'Corporate Governance, Cultural Factors And Voluntary
202 Disclosure: Evidence From Selected Companies In Bangladesh'. *Working Paper, 2011*
203 *BAASANA International Conference*. Bloomsburg University of Pennsylvania, USA.
- 204 Barako, D. G., Hancock, P. and Izan, H. Y. 2006. 'Factors Influencing Voluntary Corporate Disclosure
205 by Kenyan Companies'. *Corporate Governance: An International Review*, 14:2, 107-25.
- 206 Bear, S., Rahman, N. and Post, C. 2010. 'The Impact of Board Diversity and Gender Composition on
207 Corporate Social Responsibility and Firm Reputation'. *Journal of Business Ethics*, 97:2, 207-21.
- 208 Ben-Amar, W., Francoeur, C., Hafsi, T. and Labelle, R. 2013. 'What Makes Better Boards? A Closer
209 Look at Diversity and Ownership'. *British journal of management*, 24:1, 85-101.
- 210 Bernardi, R. A., Bosco, S. M. and Vassill, K. M. 2006. 'Does Female Representation on Boards of
211 Directors Associate With Fortune's "100 Best Companies to Work For" List?'. *Business and*
212 *Society*, 45:2, 235-48.
- 213 Berthelot, S., Coulmont, M. and Serret, V. 2012. 'Do investors value sustainability reports? A
214 Canadian study'. *Corporate Social Responsibility and Environmental Management*, 19:6, 355-
215 363.
- 216 Blau, P. M. 1977. *Inequality and heterogeneity : a primitive theory of social structure*. New York: Free
217 Press.
- 218 Boulouta, I. 2013. 'Hidden Connections: The Link Between Board Gender Diversity and Corporate
219 Social Performance'. *Journal of Business Ethics*, 113:2, 185-97.
- 220 Boyd, B. 1990. 'Corporate linkages and organizational environment: A test of the resource
221 dependence model'. *Strategic Management Journal*, 11:6, 419-30.
- 222 Brammer, S. and Pavelin, S. 2008. 'Factors influencing the quality of corporate environmental
223 disclosure'. *Business Strategy and the Environment*, 17:2, 120-36.
- 224 Bui, T. L. H. 2010. 'The Vietnamese consumer perception on corporate social responsibility'. *Journal*
225 *of International Business Research*, 9:Sl. 1, 75.
- 226 Cormier, D., Ledoux M-J. and Magnan, M. (2011) 'The informational contribution of social and
227 environmental disclosures for investors'. *Management Decision*, 49:8, 1276-1304
- 228 Clarkson, P. M., Fang, X., Li, Y. and Richardson, G. (2013). 'The relevance of environmental
229 disclosures: are such disclosures incrementally informative?' *Journal of Accounting and*
230 *Public Policy*, 32:5, 410-431
- 231 Chen, C. J. P. and Jaggi, B. 2000. 'Association between independent non-executive directors, family
232 control and financial disclosures in Hong Kong'. *Journal of Accounting and Public Policy*, 19:4,
233 285-310.
- 234 Cheng, B., Ioannou, I. and Serafeim, G. 2014. 'Corporate social responsibility and access to finance'.
235 *Strategic Journal of Management*, 35, 1-23.
- 236 Chow, C. W. and Wong-Boren, A. 1987. 'Voluntary Financial Disclosure by Mexican Corporations'. *The*
237 *Accounting Review*, 62:3, 533-41.
- 238 Cormier, D., Ledoux, M.-J. and Magnan, M. 2011. 'The informational contribution of social and
239 environmental disclosures for investors'. *Management Decision*, 49:8, 1276-304.
- 240 Craswell, A. T. 1992. 'Discretionary Disclosure of Reserves by Oil and Gas Companies: An Economic
241 Analysis'. *Journal of Business Finance & Accounting*, 19:2, 295-308.
- 242 Dawes, J. 2002. 'Five Point vs Eleven Point Scales: Does it make a difference to data characteristics?'.
243 *Australasian Journal of Market Research*, 10:1, 39-47.
- 244 Demircug-Kunt, A., Love, I. and Maksimovic, V. 2006. 'Business environment and the incorporation
245 decision'. *Journal of Banking and Finance*, 30:11, 2967-93.

246 Dess, G. G. and Davis, P. S. 1984. 'Porter's (1980) Generic Strategies as Determinants of Strategic
247 Group Membership and Organizational Performance'. *The Academy of Management Journal*,
248 27:3, 467-88.

249 Deza, M. and Deza, E. 2009. 'Encyclopedia of Distances'. Heidelberg: Springer.

250 Dhaliwal, D. S., Li, O. Z., Tsang, A. and Yang, Y. G. 2011. 'Voluntary Nonfinancial Disclosure and the
251 Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting'. *The*
252 *Accounting Review*, 86:1, 59-100.

253 Dhaliwal, D. S., Radhakrishnan, S., Tsang, A. and Yang, Y. G. 2012. 'Nonfinancial Disclosure and
254 Analyst Forecast Accuracy: International Evidence on Corporate Social Responsibility
255 Disclosure'. *The Accounting Review*, 87:3, 723-59.

256 Eng, L. L. and Mak, Y. T. 2003. 'Corporate governance and voluntary disclosure'. *Journal of Accounting*
257 *and Public Policy*, 22:4, 325-45.

258 Fama, E. F. 1980. 'Agency Problems and the Theory of the Firm'. *The Journal of Political Economy*,
259 88:2, 288-307.

260 Fama, E. F. and Jensen, M. C. 1983. 'Separation of Ownership and Control'. *Journal of Law and*
261 *Economics*, 26:2, 301-25.

262 Fernandez-Feijoo, B., Romero, S. and Ruiz, S. 2012. 'Does Board Gender Composition affect
263 Corporate Social Responsibility Reporting? 1'. *International Journal of Business and Social*
264 *Science*, 3:1.

265 Firth, M. 1979. 'Impact of size, stock market listing, and auditors on voluntary disclosure in corporate
266 annual reports'. *Accounting and Business Research*, 9:36, 273.

267 Galbreath, J. 2011. 'Are there gender-related influences on corporate sustainability?: a study of
268 women on boards of directors'. *Journal of management & organization*, 17:1, 17-38.

269 Gelb, D. and Strawser, J. 2001. 'Corporate Social Responsibility and Financial Disclosures: An
270 Alternative Explanation for Increased Disclosure'. *Journal of Business Ethics*, 33:1, 1-13.

271 Gujarati, D. N. and Porter, D. C. 2009. *Basic econometrics*. Boston: McGraw-Hill Irwin.

272 Guthrie, J. and Parker, L. 1990. 'Corporate Social Disclosure Practice: A Comparative International
273 Analysis'. *Advances in Public Interest Accounting*, 3, 159-76.

274 Hafsi, T. and Turgut, G. 2013. 'Boardroom Diversity and its Effect on Social Performance:
275 Conceptualization and Empirical Evidence'. *Journal of Business Ethics*, 112:3, 463-79.

276 Haji, A. A. 2013. 'Corporate social responsibility disclosures over time: evidence from Malaysia'.
277 *Managerial Auditing Journal*, 28:7, 647-76.

278 Han, J., Kamber, M. and Ebrary 2006. *Data mining: concepts and techniques*. Boston: Morgan
279 Kaufmann.

280 Haniffa, R. and Hudaib, M. 2006. 'Corporate Governance Structure and Performance of Malaysian
281 Listed Companies'. *Journal of Business Finance & Accounting*, 33:7-8, 1034-62.

282 Haniffa, R. M. and Cooke, T. E. 2002. 'Culture, Corporate Governance and Disclosure in Malaysian
283 Corporations'. *Abacus*, 38:3, 317-49.

284 Haniffa, R. M. and Cooke, T. E. 2005. 'The impact of culture and governance on corporate social
285 reporting'. *Journal of Accounting and Public Policy*, 24:5, 391-430.

286 Harrison, D. A. and Klein, K. J. 2007. 'What's the Difference? Diversity Constructs as Separation,
287 Variety, or Disparity in Organizations'. *The Academy of Management Review*, 32:4, 1199-228.

288 Hartley, J. and Betts, L. R. 2010. 'Four layouts and a finding: the effects of changes in the order of the
289 verbal labels and numerical values on Likert-type scales'. *International Journal of Social*
290 *Research Methodology*, 13:1, 17-27.

291 Hillman, A. J. and Dalziel, T. 2003. 'Boards of Directors and Firm Performance: Integrating Agency and
292 Resource Dependence Perspectives'. *The Academy of Management Review*, 28:3, 383-96.

293 Ho, S. S. M. and Wong, K. S. 2001. 'A study of the relationship between corporate governance
294 structures and the extent of voluntary disclosure'. *Journal of International Accounting,*
295 *Auditing & Taxation*, 10:2, 139.

296 Hopkins, M. 2012. *The Planetary Bargain: Corporate Social Responsibility Matters*. GB: Routledge Ltd.

297 Hossain, M. and Reaz, M. 2007. 'The determinants and characteristics of voluntary disclosure by
298 Indian banking companies'. *Corporate Social Responsibility and Environmental Management*,
299 14:5, 274-88.

300 Inchausti, A. G. 1997. 'The influence of company characteristics and accounting regulation on
301 information disclosed by Spanish firms'. *European Accounting Review*, 6:1, 45-68.

302 Ioannou, I. and Serafeim, G. 2015. 'The impact of corporate social responsibility on investment
303 recommendations: Analysts' perceptions and shifting institutional logics'. *Strategic
304 Management Journal*, 36:7, 1053-81.

305 Jensen, M. C. and W. H. Meckling (1976). 'Theory of the firm: Managerial behavior, agency costs and
306 ownership structure'. *Journal of Financial Economics*, 3, 305-360.

307 Jackling, B. and Juhl, S. 2009. 'Board structure and firm performance: evidence from India's top
308 companies'. *Corporate governance*, 17:4, 492-509.

309 Johnson, R. A. and Greening, D. W. 1999. 'The Effects of Corporate Governance and Institutional
310 Ownership Types on Corporate Social Performance'. *The Academy of Management Journal*,
311 42:5, 564-76.

312 Kang, H., Cheng, M. and Gray, S. J. 2007. 'Corporate Governance and Board Composition: diversity
313 and independence of Australian boards'. *Corporate Governance: An International Review*,
314 15:2, 194-207.

315 Khan, A., Muttakin, M. B. and Siddiqui, J. 2013. 'Corporate Governance and Corporate Social
316 Responsibility Disclosures: Evidence from an Emerging Economy'. *Journal of Business Ethics*,
317 114:2, 207-23.

318 Labelle, R., Makni Gargouri, R. and Francoeur, C. 2010. 'Ethics, Diversity Management, and Financial
319 Reporting Quality'. *Journal of Business Ethics*, 93:2, 335-53.

320 Lattemann, C., Fetscherin, M., Alon, I., Li, S. M. and Schneider, A. M. 2009. 'CSR communication
321 intensity in Chinese and Indian multinational companies'. *Corporate governance*, 17:4, 426-
322 42.

323 Lim, S., Z. Matolcsy and D. Chow, (2007). 'The association between board composition and different
324 types of voluntary disclosure'. *European Accounting Review* 16(3), 555-583.

325 Love, I. 2011. 'Corporate Governance and Performance around the World: What We Know and What
326 We Don't'. *World Bank Research Observer*, 26:1, 42-70.

327 Lu, Y. and Abeysekera, I. 2014. 'Stakeholders' power, corporate characteristics, and social and
328 environmental disclosure: evidence from China'. *Journal of Cleaner Production*, 64:Journal
329 Article, 426-36.

330 Mahadeo, J.D., Oogarah-Hanuman, V. and Soobaroyen, T. 2011. 'A longitudinal study of corporate
331 social disclosures in a developing economy. *Journal of Business Ethics*, 104, 545-558.

332 Matolcsy, Z., Tyler, J. and Wells, P. 2012. 'Is continuous disclosure associated with board
333 independence?'. *Australian Journal of Management*, 37:1, 99-124.

334 Matsumura, E. M., Prakash, R. and Vera-Muñoz, S. C. 2014. 'Firm-Value Effects of Carbon Emissions
335 and Carbon Disclosures'. *The Accounting Review*, 89:2, 695-724.

336 McNally, G. M., Eng, L. H. and Hasseldine, C. R. 1982. 'Corporate Financial Reporting in New Zealand:
337 An Analysis of User Preferences, Corporate Characteristics and Disclosure Practices for
338 Discretionary Information'. *Accounting and Business Research*, 13:49, 11.

339 Michelon, G. and Parbonetti, A. 2012. 'The effect of corporate governance on sustainability
340 disclosure'. *Journal of management & governance*, 16:3, 477-509.

341 Milliken, F. J. and Martins, L. L. 1996. 'Searching for Common Threads: Understanding the Multiple
342 Effects of Diversity in Organizational Groups'. *The Academy of Management Review*, 21:2,
343 402-33.

344 Milne, M. J. and Adler, R. W. 1999. 'Exploring the reliability of social and environmental disclosures
345 content analysis'. *Accounting, Auditing & Accountability Journal*, 12:2, 237-256.

346 Naser, K., Alhussaini, A., Alkwari, D. and Nuseibeh, R. 2006. 'Determinants of Corporate Social
347 Disclosure in Developing Countries: The Case of Qatar'. *Advances in International Accounting*,
348 19, 1-23.

349 Neuendorf, K. A. (2002). *The Content Analysis Guidebook*. Thousand Oaks, Calif; London: Sage.

350 Nguyen, Q. 2012. 'The industry classification for Vietnamese listed firms making investors confused'.
351 <http://vietstock.vn/2012/10/phan-nganh-viet-nam-nha-dau-tu-boi-roi-830-244474.htm> [in
352 Vietnamese] (accessed 20 February 2016).

353 Pfeffer, J. and Salancik, G. R. 1978. *The external control of organizations: a resource dependence*
354 *perspective*. New York: Harper & Row.

355 Post, C., Rahman, N. and Rubow, E. 2011. 'Green Governance: Boards of Directors' Composition and
356 Environmental Corporate Social Responsibility'. *Business & Society*, 50:1, 189-223.

357 Prado-Lorenzo, J.-M., Gallego-Alvarez, I. and Garcia-Sanchez, I. M. 2009. 'Stakeholder engagement
358 and corporate social responsibility reporting: the ownership structure effect'. *Corporate*
359 *Social - Responsibility and Environmental Management*, 16:2, 94-107.

360 Purushothaman, M., Tower, G., Hancock, P. and Taplin, R. 2000. 'Determinants of corporate social
361 reporting practices of listed Singapore companies'. *Pacific Accounting Review*, 12:2, 101.

362 Saleh, M., Norhayah, Z. and Muhamad, R. 2010. 'Corporate social responsibility disclosure and its
363 relation on institutional ownership: evidence from public listed companies in Malaysia'.
364 *Managerial Auditing Journal*, 25:6, 591-613.

365 Strand, R. 1983. 'A systems paradigm of organizational adaptations to the social environment'.
366 *Academy of Management Review*, 8, 90-96.

367 Ullmann, A. A. 1985. 'Data in search of a theory: A critical examination of the relationships among
368 social performance, social disclosure, and economic performance of U.S. firms'. *Academy of*
369 *Management Review*, 10:3, 540-557.

370 Uwuigbe, U. and Egbide, B.-C. 2012. 'Corporate Social Responsibility Disclosures in Nigeria: A Study of
371 Listed Financial and Non-Financial Firms'. *Journal of Management and Sustainability*, 2:1,
372 160-69.

373 Van der Walt, N., Ingley, C., Shergill, G. S. and Townsend, A. 2006. 'Board configuration: are diverse
374 boards better boards?'. *Corporate governance*, 6:2, 129-47.

375 Vu, K. A., Tower, G. and Scully, G. 2011. 'Corporate communication for Vietnamese listed firms'.
376 *Asian Review of Accounting*, 19:2, 125-46.

377 Vu, K. B. A. H. 2012. 'Determinants of Voluntary Disclosure for Vietnamese Listed Firms'. *School of*
378 *Accounting*. Curtin University.

379 Wang, J. and Coffey, B. S. 1992. 'Board Composition and Corporate Philanthropy'. *Journal of Business*
380 *Ethics*, 11:10, 771-78.

381 World Bank 2015. 'Vietnam, Overview'. The World Bank.
382 <http://www.worldbank.org/en/country/vietnam/overview> (Accessed on 18 February 2016).

383 Webb, E. 2004. 'An Examination of Socially Responsible Firms' Board Structure'. *Journal of*
384 *Management and Governance*, 8:3, 255-77.

385 Weetman, P. and Ghazali, N. A. M. 2006. 'Perpetuating traditional influences: voluntary disclosure in
386 Malaysia following the economic crisis'. *Journal of international accounting auditing &*
387 *taxation*, 15:2, 226-48.

388 White, H. 1980. 'A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for
389 Heteroskedasticity'. *Econometrica*, 48:4, 817-38.

390 Williams, R. J. 2003. 'Women on Corporate Boards of Directors and Their Influence on Corporate
391 Philanthropy'. *Journal of Business Ethics*, 42:1, 1-10.

392 Xiao, H. and Yuan, J. 2007. 'Ownership structure, board composition and corporate voluntary
393 disclosure: Evidence from listed companies in China'. *Managerial Auditing Journal*, 22:6, 604-
394 19.

395 Yip, E., Staden, C. v. and Cahan, S. 2011. 'Corporate Social Responsibility Reporting and Earnings
396 Management: The Role of Political Costs'. *Australasian Accounting Business & Finance*
397 *Journal*, 5:3, 17-34.