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## Earnings Quality and Corporate Social Disclosure The Moderating Role of State and Foreign Ownership in Vietnamese Listed Firms

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# **Earnings Quality and Corporate Social Disclosure: The Moderating Role of State and Foreign Ownership in Vietnamese Listed Firms**

## **Abstract**

By investigating the effect of earnings quality on corporate social disclosure (CSD) in the context of Vietnam, this study tests whether firms uphold managerial opportunism based on the agency theory or social responsibility based on stakeholder theory. It also tests the moderating effect of state and foreign ownership on the relationship between earnings quality and CSD. This study finds that the long-term perspective argument dominates in the relationship between earnings quality and CSD, indicating that earnings quality is positively and significantly associated with CSD. The study also finds that the increasing proportion of shares held by the government in firms weakens the relationship between earnings quality and CSD.

Keywords: earnings quality, corporate social disclosure, agency theory, stakeholder theory

## **Introduction**

The debate about managers behaviour whether self-centered or altruistic has re-surfaced with the broadened disclosure that comprise financial and non-financial with non-financial taking a large volume in annual reports and company websites. The debate has taken a center stage with non-financial disclosure such as corporate social disclosure (CSD) because they are voluntary and often not subjected to a formal audit. For instance, Prior, Surroca, and Tribo (2008) reported that multinational firms across 26 countries used CSD to diverge attention from earnings management. Choi, Lee, and Park (2013) subsequently found in the context of Korea that ownership structure can influence managerial motivation to engage in CSD. The accelerated economic growth in Vietnam, not only makes a loud appeal for foreign capital but has taken into a period of transitional flux from state ownership to private ownership of enterprises, with a mix of partially state-owned and partially foreign-owned enterprises. The economic welfare of the Vietnamese society depends not only on the public funding but also private activities and taking responsibility for the society (Vorobyeva and Phuong, 2017). These findings from the literature bring forth examining the relationship between CSD and earnings quality not only to contribute to the public policy in Vietnam but also to contribute to a broader understanding as a few studies have examined the influence of earnings quality on CSD Yip, Staden, and Cahan 2011, Chih, Shen, and Kang 2008, Kim, Park, and Wier 2012.

The managerial motivation behind CSD has come under much debate but the managerial motivation in the context of earnings quality on CSD has received little attention. Certain managerial motivations are identifiable through actions taken by them, certain other managerial motivations are implicit in actions and become noticeable through outcomes. In this study, we take the position that the firm ownership (to the extent of state ownership, or foreign ownership) as an implicit motivation for managers to take a perspective on CSD.

Managers can take a short-term opportunistic perspective or a long-term efficiency perspective on CSD. When firms report earnings that are sustainable, predictable, and less manipulated by accruals, it is indicative that firms' earnings are reported responsibly and predictably. It is likely that firms can take a long-term efficiency perspective on CSD. However, in an emerging nation such as Vietnam, there is also a possibility that managers behave opportunistically to benefit from the expansive economic growth.

Our empirical results and contributions resulting from those findings are as follows. First, the standardised aggregate earnings quality is positively correlated with CSD when all firms are considered. The finding contributes to the understanding that managers can take an efficient perspective in non-financial disclosure, along with the established notion that managers take an opportunistic view on financial disclosure. The divided managerial perspective between financial and non-financial disclosure can inform owners and policymakers about divergent frameworks and accountabilities required for the two strands of disclosure. Second, this relationship becomes weaker with the state having increasing ownership in firms, which suggests that when the earnings quality becomes low in a state-owned company, the state-owned company is likely to decrease the stakeholder-relevant CSD. The finding informs the statutory policymakers to closely monitor the nature and the magnitude of state influence on managers efficiency perspective and may consider including CSD and their activities as part of audit to uphold public policy performance matrix on economy, efficiency, and effectiveness. Third, our evidence shows that foreign ownership has no moderating effect on the relationship between earnings quality and CSD. The finding contributes to the public policy framework to hold foreign ownership in Vietnam become responsible not only to contribute through taxes but also through socially beneficial activities to Vietnam and requiring such disclosure in annual reports. Fourth, the three-dimensional CSD index developed in this study contributes to a methodological improvement in

measuring stakeholder-relevant CSD, making findings and facilitate stakeholder-relevant policy revisions.

## **Related literature and hypotheses**

Agency theory is based on the premise that there is an inherent conflict between the interests of a firm's owners (shareholders) and its management (Fama and Jensen 1983). Therefore, firms may use different methods, such as compensation plans or voluntary disclosures, to reduce conflicting interests between managers and shareholders. Accounting information is made by agents to communicate financial position, performance, and change in financial position to principals. Any information asymmetry between the managers and shareholders can lead to the moral hazard problem. Agency theory on corporate social responsibility/CSD, argues that managers can opportunistically use corporate resources to pursue goals that enhance their own utility in ways that are unlikely to provide significant returns to shareholders. For example, Vanhamme and Grobbsen (2009) find that firms using corporate social responsibility in times of crisis can uphold reputation only when they have a history of corporate social responsibility disclosure. Accordingly, Friedman (1970) argues that companies that take part in corporate social responsibility practices only want to benefit from the reputation and the publicity they receive, with the sole objective of maximizing their own profits. Because managerial decisions directly impact all the stakeholder groups, managers can be viewed as not only the agents of shareholders but also the agents of other stakeholders (Jones 1995). Consistent with these arguments, studies indicate that companies resort to corporate social responsibility in order to hide their manipulating reported earnings (Prior, Surroca, and Tribó 2008, Chih, Shen, and Kang 2008, Petrovits 2006). To test this view, this study proposes the following hypothesis which is based on managers' opportunistic incentives:

**H1A:** There is a negative relationship between CSD and earnings quality.

Based on the stakeholder theory (Freeman 1984), some researchers suggest that corporate social responsibility is part of a long-run perspective of economic gain that may not be financially measurable but may provide a valuable asset for future profitability, and eventually enhances the financial status of firms (Carroll 1999, Davis 1960, Choi, Lee, and Park 2013). Davis (1960) suggests that taking care of social responsibilities and financial status is a necessary activity for firms, for long-run sustainability. Accordingly, Choi et al. (2013) propose that a firm's quality of earnings needs to be commensurate with its corporate social responsibility activities to meet the needs of the stakeholders. Studies also indicate that firms' engagement with corporate social responsibility mitigates earnings management (Scholtens and Kang 2013, Kim, Park, and Wier 2012). Based on this long-run perspective, the following hypothesis is proposed:

**H1B:** There is a positive relationship between CSD and earnings quality.

Vietnamese listed firms have high state ownership and control as their institutional environment. This is partly attributed to the fact that most of these now listed firms were previously SOEs. The average level of state ownership of listed firms in this study is 27 per cent. State ownership in firms assists the government to enact social objectives through firms, and this study considers the impact of ownership structure on the CSD practices–earnings quality relationship.

State managers have less pressure to manipulate firms' earnings because their financial incentive structure is not connected with firms' earnings (Wang and Yung, 2011). The government's requirement is to obtain a guaranteed return from firms with state ownership. The government is also prepared to provide additional funds to those firms (Ding, Zhang, and Zhang 2007, Jiang and Habib 2009, Wang and Yung 2011). As a result, firms with higher state ownership have fewer incentives to disclose more information because increasing state ownership in firms provides greater access to firms' information on (state) demand (Jiang and

Habib 2009). Another reason is that firms with higher state ownership are discouraged from disclosing more information because of political constraints (Ghazali and Weetman 2006). There should, therefore, be a negative interaction between state ownership and earnings quality in determining a firm's CSD practices.

**H2:** More state ownership will weaken the relationship between earnings quality and CSD.

Firms with higher foreign ownership are required to increase informative disclosures in order to raise and retain foreign investment (Boubakri et al. 2007, Haniffa and Cooke 2005). Strengthening the supply of capital from foreign investors is crucial in the development of many emerging capital markets (Bokpin and Isshaq 2009, Mangena and Tauringana 2007). Firms with higher foreign ownership are considered to be associated with better monitoring and are thus expected to reduce the ability of insiders to manipulate earnings for private purposes (Doidge 2004, Hail and Leuz 2009). Foreign ownership also has a positive and significant relation with the level of information transparency and in the long term can stimulate the growth of a firm, capital markets, and a country as a whole (Ho, Tower, and Taylor 2013).

In the Vietnamese context, the government has taken various steps to increase foreign ownership by reducing restrictions on foreign investment. The foreign ownership maximum limitation was increased from 20 per cent in 2000 to 30 per cent in 2003 and finally to 49 per cent in 2005 for listed firms except for banks. The majority of foreign owners are from developed countries that have stronger financial regulatory systems. These foreign investors are more likely to be aware of the importance of financial and non-financial information in investment decision making. Therefore, we propose the following hypothesis:

**H3:** More foreign ownership will strengthen the relation between earnings quality and CSD.

## **Measures and the sample**

### **Earnings quality measures**



This study constructed an standardised aggregate earnings quality score based on four accounting measures of earnings attributes used in prior studies (Francis et al. 2004, Boonlert-U-Thai, Meek, and Nabar 2006), namely, accruals quality, earnings persistence, earnings predictability, and earnings smoothness. Using the autoregressive approach, this study uses these four earnings quality measures as specific to firms and each quality measure is estimated by rolling over the specific measure over a five-year period. Because the accruals quality measure requires lagged and forward data, a firm is included in the year t sample if data are available for seven years from years t-5 to t+1.

### ***Accruals quality***

Accruals quality (AQ) in this study is based on the widely used Dechow and Dichev (2002) statistical calculation technique, where it is measured by relating total current accruals to cash flows from operations. The extent to which current accruals map to cash flows from operations indicates higher earnings quality. Therefore, lower standard deviation of residuals represents higher earnings quality. AQ as the standard deviation of residuals ( $\epsilon_j$ ) is obtained from the following regression:

$$TCA_{j,t} = \varphi_0 + \varphi_1 CFO_{j,t-1} + \varphi_2 CFO_{j,t} + \varphi_3 CFO_{j,t+1} + \epsilon_{j,t} \quad (1)$$

Where  $TCA_{j,t}$  = firm j's total current accruals in year t ( $\Delta CA_{j,t} - \Delta CL_{j,t} - \Delta Cash_{j,t} + \Delta STDEBT_{j,t}$ );  $CFO_{j,t}$  = firm j's cash flow from operations in year t;  $\Delta CA_{j,t}$  = firm j's change in current assets between year t-1 and year t;  $\Delta CL_{j,t}$  = firm j's change in current liabilities between year t-1 and year t;  $\Delta Cash_{j,t}$  = firm j's change in cash between year t-1 and year t; and  $\Delta STDEBT_{j,t}$  = firm j's change in debt in current liabilities between year t-1 and year t. All variables in equation (1) are deflated by firm j's total assets in year t-1.

### ***Earnings persistence***

Earnings persistence (PERSIS) is the extent to which current period earnings reflect future period earnings. Following Francis et al. (2004), PERSIS is measured as the negative of the slope coefficient estimate,  $\phi_{1,j}$ , from the following model:

$$\text{Earn}_{j,t} = \phi_{0,j} + \phi_{1,j}\text{Earn}_{j,t-1} + v_{j,t} \quad (2)$$

Where  $\text{Earn}_{j,t}$  = firm's j net income before extraordinary items in year t. All variables in equation (2) are deflated by firm j's total assets in year t-1. Larger values (i.e., less negative) of PERSIS indicate less earnings quality.

### ***Earnings predictability***

Earnings predictability (PREDICT) is the ability of earnings to predict itself (Lipe 1990). Our measure of PREDICT is the standard deviation of the residuals ( $v_j$ ) from equation (2), following Francis et al. (2004). Larger values of PREDICT imply less earnings quality.

### ***Earnings smoothness***

This study adopts the measure of earnings smoothness (SMOOTH) in Francis et al. (2004) as the ratio of firm i's standard deviation of net income before extraordinary items scaled by beginning total assets, to its standard deviation of cash flows from operations scaled by beginning total assets. Larger values of SMOOTH imply less earnings quality.

### ***The standardised aggregate earnings quality score***

Based on the four individual earnings quality measures (AQ, PERSIS, PREDICT, SMOOTH), this study constructs a standardized aggregate earnings quality score. Based on how the individual earnings attributes are ascertained, the larger the value of the individual earnings quality measure, the lower the earnings quality. Following Leuz, Nanda, and Wysocki (2003), the four individual earnings quality values are arranged in descending order, so that a higher ranked value now represents higher earnings quality. The standardized aggregate earnings quality score of a firm is computed by averaging the firm rankings for the four individual earnings quality measures.

## **CSD measures**

This study constructs a three-dimensional CSD index where one dimension is the quantity of CSD, and other two relate to disclosure type quality and disclosure item quality. A content analysis of annual reports is used to measure the quantity of CSD. To ensure consistency, only one of the authors coded all the annual reports, and a set of basic coding rules was constructed to ensure reliability and validity. This was repeated after two weeks (Haji 2013) in order to avoid the possibility that the first and the second scoring might influence each other (Weetman and Ghazali 2006). 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.

This study uses the Global Reporting Initiative (GRI) 3.1 index, the social indicators in particular, to measure CSD practices in Vietnam. The social indicators in the GRI 3.1 index identify key performance aspects surrounding labor practices, human rights, society, and product responsibility. They consist of four aspects, including 15 items of labor practices and decent work indicators (LA1 to LA15), 11 items of human rights indicators (HR1 to HR11), 10 society indicators (SO1 to SO10), and 9 product responsibility indicators (PR1 to PR9). The GRI framework items are used for CSD in this study because those reporting items have been standardized across the firms and objectives, regardless of their geographical location (Adams 2002).

### ***Measuring disclosure quantity***

In order to measure the disclosure quantity, this study examines the different items in the checklist using binary scores. This is consistent with CSD studies in emerging capital markets (Khan, Muttakin, and Siddiqui 2013, Haji 2013, Haniffa and Cooke 2005). The disclosure of an item within the checklist in the annual reports is scored as "1", while the non-disclosure of an item within the checklist in the annual reports is scored as "0".

### *Measuring disclosure item quality and disclosure type quality*

The binary approach to measuring disclosure quantity has been criticized because it assumes that all items are equally important (Barako, Hancock, and Izan 2006). Lu and Abeysekera (2014) create a combined disclosure quality measure using the importance of reporting items and the importance of different disclosure types. This study extends Lu and Abeysekera's (2014) study by obtaining perceptions from 652 stakeholders about the importance of reporting items, rather than the 12 stakeholders used in that study.

The two aspects of disclosure quality (i.e., disclosure type quality and disclosure item quality) in this CSD index are measured by surveying four stakeholder groups (employees, lawyers and regulators, local communities, and customers) to obtain their perceptions on disclosure type preference (i.e., narrative; monetary quantification; numerical quantification; both monetary and numerical), and about disclosure reporting items (i.e., items in the social indicators of the Global Reporting Initiative 3.1). The types of disclosure are narrative, monetary quantification (i.e. the amount of money), numerical quantification (i.e. the number or statistics), both monetary and numerical. The social indicators in the GRI 3.1 index consist of four aspects: labour practices, human rights, society, and product responsibility. For the type of items, if the same item is disclosed more than once with different types, an average score is computed to allow each item to contribute to the overall results.

The questionnaires were delivered by hand to the target stakeholder groups.<sup>1</sup> Different stakeholder groups received different versions of the questionnaire. The social stakeholders included employees (labor stakeholders) who responded to the questionnaire for aspects of labor practices and decent work; customers (product stakeholders) who responded to the questionnaire for product responsibility aspects; members of local communities (society stakeholders) who responded to the questionnaire for societal aspects; and lawyers and

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<sup>1</sup> Given the limited number of pages allowed in the manuscript, the questionnaires are available upon request.

regulators (human rights stakeholders) who responded to the questionnaire for human rights aspects. The questionnaire has a scale of zero (unimportant) to 10 (the most important), making it an 11-point scale. This 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. They were also asked for their perceptions on the importance of four disclosure types (i.e., narrative, monetary quantification, numerical quantification, both monetary and numerical) for each item based on a rating scale from zero to 10.

The weight for a particular item is calculated by summing the integer values assigned to the item and then dividing the total 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 summing the integer values assigned to each particular type of disclosure for each item and then dividing the total by the number of individuals who responded to this type. A mean score is used to summarize the response scores within a specific stakeholder group.

***The stakeholder-driven, three-dimensional CSD index***

The stakeholder-driven, three-dimensional CSD index is computed for each firm using the following equation:

$$CSD\_INDEX_j = \frac{\sum_{i=1}^n Quantity_i * ItemQuality_i * TypeQuality_i}{\max(SCORE_i)} \quad (3)$$

where  $CSD\_INDEX_j$  = 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 in the checklist; and  $\max(\text{SCORE})$  = the maximum score of three disclosure dimensions for a given firm: disclosure quantity score \* disclosure type quality score \* disclosure item quality score.

### ***Control variables***

This study controls for firm characteristics such as return on assets (ROA), auditors (AUDIT), state ownership (STATE), foreign ownership (FOREIGN), and stock exchange location (STOCK\_EX), which influence CSD (e.g., Purushothaman et al. 2000, Cormier, Ledoux, and Magnan 2011, Vu, Tower, and Scully 2011a, Vu 2012).

Prior studies show that female directors are active in contributing to social issues, and are more likely to sponsor charities and have stronger relationships with surrounding communities, shareholders, and other stakeholder groups (Siciliano 1996, Williams 2003, Bernardi and Threadgill 2010). Furthermore, recent literature shows that female directors are associated with higher earnings quality (Gul, Hutchinson, and Lai 2013, Srinidhi, Gul, and Tsui 2011). Hence, this study also uses female directors (FEMALE) as a control variable in examining the relationship between earnings quality and CSD.

### ***The relationship between earnings quality and CSD***

The hypotheses 1A and 1B regarding the effect of CSD on earnings quality are tested using an OLS estimator. The regression function is:

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

In order to test the hypotheses 2 and 3 about the effects of state and foreign ownership on CSD-earnings quality relation, the following regression is used:

$$CSD\_INDEX_i = \beta_0 + \beta_1 EQ_i + \beta_2 EQ_i \times STATE_i + \beta_3 EQ_i \times FOREIGN_i + \sum \eta_{j,i} control\ variables_i + \varepsilon_i \quad (5)$$

where  $CSD\_INDEX_i$  = firm  $i$ 's stakeholder-driven, three-dimensional CSD index;  $EQ_i$  = firm  $i$ 's standardised aggregate earnings quality score, calculated as the average rank across

the four individual measures (accruals quality, earnings persistence, earnings predictability, and earnings smoothness); and  $i = 1, \dots, 133$  firms.

### ***The sample***

The sample consists of all Vietnamese listed firms for which the required data items are available, except for banks and other financial industry firms. This study examines the annual reports during the year ended 31 December 2010 to capture the quality of CSD of Vietnamese listed firms. The 2010 year was chosen in this study as on 15 January 2010, the Ministry of Finance in Vietnam issued the Guidance for Information Disclosure on Stock Exchange with the aim of providing guidance to enhance the disclosure practices of Vietnamese listed firms. The individual earnings quality attributes are estimated by using five-year rolling windows from 2006 to 2010 to generate the 2010 earnings quality measures of the sample, similar to Francis et al. (2008). Accruals quality is one of four earnings quality measures in this study. Because estimating this measure requires lagged and forward data, this study generated the 2010 accruals quality measure by using the financial statement data items for seven years, from 2005 to 2011.

The financial statement data items are extracted from the websites for Ho Chi Minh stock exchange (HOSE) and Hanoi stock exchange (HNX) for the fiscal years 2005 to 2011. The year 2005 is when HNX came into operation. The final sample, with all required data available, includes 133 firms.

## **The results**

### **Descriptive statistics**

Table 1, Panel A, shows the ratings awarded by the employees to the various reporting items concerning the labor aspect (LA). The highest mean score for those reporting items was 7.47 and the lowest was 6.44, out of a maximum possible score of 10. In analyzing the disclosure types for the 15 reporting items of the labor aspect, employee respondents rated the highest

scores for items with numerical disclosures (60% or 9 items), and for reporting items with both monetary and numerical disclosures (40% or 6 items). Employees assigned the lowest scores for the items with monetary disclosures (73.33% or 11 items), and for the items with narrative disclosures (26.67% or 4 items).

Table 1, Panel B, provides the ratings awarded by lawyers and regulators to the various information items about the human rights aspect (HR). The highest mean score for the information items was 8.19 and the lowest was 6.38. Related to the disclosure types, out of 11 items in the human rights aspect, lawyers and regulators assigned the highest scores for items with numerical disclosures (81.82% or 9 items), and for items with both monetary and numerical disclosures (18.18% or 2 items). They assigned the lowest scores for items with narrative disclosures (90.91% or 10 items) and items with monetary disclosures (9.09% or 1 item).

Table 1, Panel C, presents the ratings assigned by the members of local communities for the various reporting items having to do with the societal aspect (SO). The highest mean score for the reporting items was 7.92 and the lowest was 6.22. Related to the disclosure types, interestingly, out of 10 items 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 to all 10 items with narrative disclosures.

Table 1, 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 was 8.08 and the lowest was 6.62. Related to the disclosure types, out of 9 items in the product aspect, customers assigned the highest scores for the items with both monetary and numerical disclosures (88.89% or 8 items), and one item with narrative disclosures (11.11%). They assigned the lowest scores to the items with narrative disclosures (55.56% or 5 items), monetary disclosures (33.33% or 3 items), and one item with numerical disclosures (11.11%).



< Insert Table 1 about here >

Table 2 presents the descriptive statistics. As shown in Table 2, the sample mean value of *EQ* is 67.0. A higher *EQ* implies a higher level of earnings quality. The *AQ* measure has a mean value of 0.06. *PERSIS*, which captures (the negative of) the extent to which an earnings innovation remains in the series, has a mean value of -0.44. *PREDICT* has a mean value of 0.07. Finally, *SMOOTH*, which captures the variability of income relative to the variability of cash flows, has a mean value of 0.48.

The stakeholder-driven, three-dimensional CSD index (*CSD\_INDEX*) ranged from 3 per cent to 23 per cent with a mean of 10 per cent, which reveals that CSD of listed firms in the sample is low. This is because CSD practices are relatively new in Vietnam (Vu, Tower, and Scully 2011a). The findings are consistent with the study by Vu, Tower, and Scully 2011a), which examines the quantity of voluntary disclosure, including social disclosure, in Vietnam. Four different social aspects of disclosure, i.e., labor (*LAD\_INDEX*), society (*SOD\_INDEX*), product (*PRD\_INDEX*), and human rights (*HRD\_INDEX*), have mean scores of 17 per cent, 4 per cent, 16 per cent, and 1 per cent, respectively<sup>2</sup>.

The average percentage of state ownership in our sample is 27 per cent (with a range of zero to 79.07 per cent), and this represents a highly concentrated ownership by the state. Because of the 49 per cent maximum foreign ownership ceiling in Vietnamese listed firms, the average percentage of foreign ownership is quite low (12 per cent with a range of zero to 49 per cent). The average of *FEMALE* is approximately 14 per cent and there are no all-female boards.

< Insert Table 2 about here >

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<sup>2</sup> The stakeholder-driven, three-dimensional labour aspect disclosure index (*LAD\_INDEX*) is computed for each firm using the equation similar to the equation of calculating the stakeholder-driven, three-dimensional CSD index but measures only with labour aspect. This is similar to measure *SOD\_INDEX*, *PRD\_INDEX* and *HRD\_INDEX*.

Four individual earnings attribute measures (AQ, PERSIS, PREDICT, and SMOOTH) are highly correlated, with coefficients of more than 0.3 (results are not tabulated but are available upon request), suggesting reasonable factorability (Hair 1998). Additionally, the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.76 for the overall test and more than 0.7 for each earnings attribute measure (not tabulated), above the commonly recommended value of greater than 0.5 (Hair 1998). The Bartlett's test of sphericity is significant ( $\chi^2(6) = 235.82, p < 0.000$ ). Adopting the 'eigenvalue-greater-than-one rule' (Hair 1998), this study reduces the number of factors to one because there is only one factor with eigenvalue of 2.68 (not tabulated). Factor analysis suggests that a single factor represents these four earnings attribute measures, and they accounted for 66.90 per cent of the total variance, above the criterion of 60 per cent (Hair 1998). Hence, it is proper to combine the four earnings attributes measures into a single standardized aggregate measure of earnings quality. This approach is similar to Leuz et al. (2003), who used factor analysis to clarify the combination of four individual earnings management measures into a standardized aggregate earnings management score.

### **Regression analyses and findings**

This study checked for the variance inflation factor (VIF) for the regression models. Because the individual values of VIF are less than 10 for all the regression models, multicollinearity does not seem to be a problem for the test models in this study (Gujarati and Porter 2009).

To confirm whether or not heteroscedasticity exists, this study used the Breush-Pagan test. The p-values were found to be significant ( $p < 0.04$ ), thus the null hypothesis is rejected, indicating the presence of heteroscedasticity. To correct the possible influence of heteroscedasticity, OLS regression with heteroscedasticity robust standard errors (White 1980) was used to test the effect of earnings quality (EQ) on CSD (CSD\_INDEX), and the

moderating effect of the ownership structure (i.e., EQ\*FOREIGN and EQ\*STATE) on the relationship between earnings quality and CSD.

Table 3 provides the results for the tests of hypotheses 1A, 1B, 2, and 3, using CSD\_INDEX as the dependent variable. The independent variables were EQ, EQ\*FOREIGN, and EQ\*STATE. Two models examined the relationship between the dependent variable and independent variables and the results are reported in Table 3.

Column (1) of Table 3 examines the relationship without interacting variables in equation (4). In that model, the coefficient estimate of the standardized aggregate earnings quality (EQ) is positive and significant ( $\alpha_1 = 0.0003$ ,  $p = 0.079$ ). This indicates that firms that report high quality earnings also have high CSD. This result confirms hypothesis 1B (i.e., there is a positive relationship between earnings quality and CSD).

Column (2) of Table 3 adds the interaction variables between STATE and EQ and between FOREIGN and EQ in the model (equation (5)). They are included to reveal the effects of state and foreign ownership on the relationship between earnings quality and CSD. The coefficient of EQ is still positive and significant ( $\alpha_1 = 0.0008$ ,  $p = 0.007$ ), while the coefficient of the interaction variable between STATE and EQ is negative and significant ( $-0.0015$ ,  $p$ -value of 0.034) as shown in Column (2) of Table 3, which confirms hypothesis 2 (i.e., more state ownership will weaken the relationship between earnings quality and stakeholder-relevant CSD) suggesting that firms with more state ownership and with high earnings quality, are likely to report less stakeholder-relevant CSD. After adding the interaction variable of STATE and EQ, the results show that it is likely that EQ, and STATE, have substitutive effect on stakeholder-relevant CSD. When the earnings quality becomes low in a state-owned company, the state-owned company is likely to decrease the stakeholder-relevant CSD. Additionally, the estimated coefficient of the interaction term of FOREIGN and EQ is negative ( $-0.0012$ ) but insignificant ( $p$  value = 0.295), suggesting that

foreign ownership does not have an effect on the relationship between earnings quality and CSD, which rejects hypothesis 3 (i.e., more foreign ownership strengthens the relation between earnings quality and CSD). This result is consistent with the study conducted by Choi et. al. (2013) in Korea, which documents that the presence of foreign investors does not influence the relationship between earnings quality and corporate social responsibility ratings. There are two possible reasons for this. First, it could be that foreign investors may experience difficulties in controlling managerial behavior because of the geographical differences, language, and culture (Xiao and Yuan 2007, Choi, Lee, and Park 2013). Second, the 49 per cent maximum foreign ownership ceiling also can limit the power of foreign investors to influence the reporting behavior of the firm (Vu, Tower, and Scully 2011a).

< Insert Table 3 about here >

The results for control variables shown in Table 3 indicate a significant positive association (p values < 0.003) between *AUDIT* and *CSD\_INDEX*, which suggests that the quality of CSD is higher for firms that are audited by the big four audit firms, consistent with prior studies (Craswell 1992, Inchausti 1997, Uwuigbe and Egbide 2012). Return on asset (ROA) has positive and significant coefficients, suggesting that firms with better financial performance are likely to make more CSD, as is consistent with the existing literature (Khan et al., 2013; Lu and Abeysekera, 2014; Haniffa and Cooke 2005). The *STOCK\_EX* is positively and significantly (p values < 0.0001) correlated with *CSD\_INDEX*, which indicates that firms listed on HOSE are likely to engage in significantly more CSD than firms listed on HNX. This is consistent with Vu (2012), who examined determinants of voluntary disclosure for Vietnamese listed firms. *FOREIGN* is not significantly related to *CSD\_INDEX* in column (1), which is consistent with prior studies (Said, Hj Zainuddin, and Haron 2009, Haniffa and Cooke 2005). In the context of this study, this is probably because the 49 per cent maximum foreign ownership ceiling limits the power of foreign investors to influence the reporting

behavior of the firm (Vu, Tower, and Scully 2011a). Similarly, *STATE* is not significantly related to *CSD\_INDEX* in column (1), consistent with the findings of Naser et al. (2006) and Lu and Abeysekera (2014). This may reflect the business models in a country like Vietnam where shares of most listed firms are owned by the government. If the government owns shares in most firms listed on the stock exchange, these firms will have little incentive to make voluntarily disclosures, including CSD. In column (2) of Table 3, although *FOREIGN* is not significantly related to CSD, *STATE* is positively and moderately significant (p value = 0.063) with *CSD\_INDEX*. *FEMALE* is positively significant (p values = 0.01) with *CSD\_INDEX*. This is consistent with prior studies (Zhang, Zhu, and Ding 2013, Post, Rahman, and Rubow 2011).

### **Additional analysis and robustness tests**

#### **The standardized aggregate earnings quality score without accruals quality**

Wysocki (2006) expresses concerns about using accruals quality (AQ) as an attribute to measure earnings quality because this attribute can drive results of earnings quality, subjugating other attributes. More specifically, Wysocki finds that current cash flows are simultaneously significantly and negatively related to current accruals. Wysocki notes that although there are other dimensions in a composite earnings quality measure, the accruals quality is the most discerning and damaging dimension. Guided by Wysocki, to ensure that results in this study are not simply driven by AQ, all tests are repeated with an alternative earnings quality by averaging the firm rankings for the three standardized aggregated individual earnings attributes measures (EQ\_3ATTRI: earnings persistence, earnings predictability, and earnings smoothness) only. The results are presented in Table 4.

< Insert Table 4 about here >

The results as shown in Table 4 are similar to those in Table 3 and hence support hypothesis 1B (i.e., there is a positive relationship between CSD and earnings quality),

confirming hypothesis 2 (i.e., more state ownership will weaken the relationship between earnings quality and CSD), but rejecting hypothesis 3 (i.e., more foreign ownership strengthens the relation between earnings quality and CSD). The exception is that the effect of STATE on CSD\_INDEX in column (2) of Table 4 is not statistically significant, with a p-value of 0.13. Additionally, the impact of earnings quality on CSD in column (1) of Table 4 is more significant than that of Table 3 ( $p = 0.037$  vs.  $p = 0.079$ ) whereas the interaction term of state ownership and earnings quality in Table 4 is less significant than that in Table 3 ( $p = 0.077$  vs.  $p = 0.034$ ). Overall, these results show that findings in this study are not simply driven by accruals quality and are generally consistent when using alternative proxies for earnings quality.

### **Earnings quality and labor and society aspects of disclosure quality**

Pham (2011) documents that managers of Vietnamese firms focus greatly on charity and employment matters, such as health and safety and the working environment, in corporate social policies. Choi et al. (2013) also state that these two aspects, society and labor, help to counter adverse public opinions and ease strain firms have with the government and labor unions. Following Choi et al. (2013), this study constructed another social disclosure index consisting of two aspects, i.e., society (10 items) and labor (15 items) only, rather than the four aspects (i.e., society, labor, human rights, and product responsibility) included in the main model. The results are provided in Table 5. They are consistent with the main findings in Table 3.

< Insert Table 5 about here >

### **Endogeneity**

The main results provide evidence of a positive relationship between earnings quality and CSD. One concern here is that the relationship may be endogenous, potentially biasing the results. In order to test for reverse causality—that is, CSD influences earnings quality—this

study uses two approaches to address this concern.<sup>3</sup> First, we use two-stage least squares, instrumental variable regressions to estimate the relationship between earnings quality and CSD. We use innate factors according to Francis *et al.* (2005) as the instrumental variables and find similar results to our reported results (See Table S1, available online). Second, because the sample size in this study is quite small (133 firms), to address the endogeneity issue, we also estimate CSD\_INDEX and EQ regressions using the limited-information maximum likelihood method. Again we obtain consistent results (See Tables S2 and S3, available online).

## **Conclusions**

The paper explores the relationship between CSD and earnings quality of Vietnamese listed firms and also examines the effects of state and foreign ownership on the relationship between CSD and earnings quality. The results support hypothesis 1B but not hypothesis 1A, meaning that the long-term perspective argument dominates the managerial opportunism hypothesis in the relationship between earnings quality and CSD. Specifically, our findings suggest that earnings quality is positively and significantly associated with CSD. We also find that the relationship between earnings quality and CSD is weakened as the percentage of shares held by government increases, which confirms hypothesis 2. Meanwhile, the presence of foreign investors does not influence the association between earnings quality and CSD, which rejects hypothesis 3. Robustness tests also confirm these results.

In addition to the contribution from this study noted in the Introduction section, to the best of our knowledge, this is the first concerted attempt to examine the relationship between earnings quality and CSD for the small and newly emerging market of Vietnam. Vietnam is one of the lowest ranked countries in protecting investors among the Southeast Asian countries. In addition, the empirical results which demonstrate the current CSD practices of

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<sup>3</sup> Given the limited number of pages allowed in the manuscript, the results are not reported here (for more details, please see the Supplementary Material, available online).

Vietnamese listed firms and stakeholders' perceptions to CSD, will benefit regulators in better understanding firms' CSD practices and stakeholders' expectations. The evidences can be references for Vietnamese authority to improve the current guidelines on the stakeholder-relevant CSD of Vietnamese listed firms. Furthermore, despite becoming a fast-growing economy with increasing prominence in the Asia-Pacific, the Vietnamese economy is still relatively under-examined, particularly with regard to its accounting and finance aspects (Vu, Tower, and Scully 2011b). This study reflects an attempt to fill the gap in the literature by extending the understanding of firms earnings quality, stakeholder-relevant CSD, and the moderating effect of ownership structure in the Vietnamese context.

We acknowledge that the sample size and confining the analysis of disclosure to 2010 year may limit the generalizability of results. We chose the survey and annual reports analysis to obtain clarity about the role Circular No. 09/2010/TT-BTC dated January 15, 2010 play in the transparency of disclosure of listed firms and stakeholders' perspectives. The requirement of five years' rolling data to measure accruals quality while the two Vietnamese stock exchanges with HOSE established in 2010 and HNX established in 2005, also influenced the year of choice in the study. Studies document that firms' disclosure policies appear to remain relatively constant over time (Muttakin and Khan 2013, Healy, Palepu, and Sweeney 1995). A longitudinal study where disclosure policies have varied within the time period can provide different insights. This study found the Audit firm selection (Big four versus otherwise) and female board representation are likely to increase stakeholder-relevant CSD, can bring forth a future study to examine the influence of other internal and external corporate governance measures on corporate social disclosure.

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**Table 1. List of 45 items with the mean importance weighted by four stakeholder-specific groups for disclosure items and types, in their order of relative importance of items.**

*Panel A*

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

Labor items (LA)	Mean weight of items disclosed	Mean weight of each type of disclosure				Total number of firms disclosing item
		Narrative	Monetary	Numerical	Both monetary and numerical	
LA11	7.47	6.53	6.75	6.92	7.51	86
LA7	7.38	6.28	6.00	7.17	7.06	14
LA8	7.29	6.49	6.31	7.02	6.97	52
LA4	7.28	6.22	5.99	7.19	6.92	26
LA5	7.28	6.34	5.99	7.09	6.84	4

LA9	7.27	6.54	6.37	7.06	6.88	28
LA3	7.18	6.15	7.00	7.19	7.68	7
LA2	7.15	6.03	5.85	6.92	6.69	38
LA12	7.11	6.65	6.10	7.10	7.12	57
LA10	7.05	6.20	6.02	6.94	6.90	89
LA1	6.97	5.77	5.85	7.04	7.27	124
LA14	6.78	5.84	6.35	6.74	7.16	54
LA15	6.7	5.73	5.69	6.88	6.90	8
LA6	6.47	5.94	5.60	6.69	6.34	15
LA13	6.44	5.97	5.27	6.53	6.26	133

*Panel B*

*List of 11 human rights items and the mean importance weighted by lawyers and regulators for disclosure items and disclosure types.*

Human rights items (HR)	Mean weight of items disclosed	Mean weight of each type of disclosure				Total number of firms disclosing item
		Narrative	Monetary	Numerical	Both monetary and numerical	
HR7	8.19	5.27	5.90	7.90	6.64	2
HR11	7.98	5.19	6.00	7.52	7.36	4
HR4	7.9	5.28	5.25	7.64	6.78	9
HR6	7.89	5.43	6.07	7.89	7.21	1
HR5	7.28	4.91	5.23	6.99	6.32	5
HK9	7.19	5.26	5.62	6.79	6.61	3
HR3	7.18	4.62	5.64	7.03	6.82	10
HR8	6.93	5.53	5.83	6.96	6.53	1
HR10	6.71	4.87	5.17	6.45	6.41	5
HR1	6.69	4.71	6.01	7.05	7.68	6
HR2	6.38	4.55	5.30	6.75	6.97	1

*Panel C*

*List of 10 items of societal aspects and the mean importance weighted by local communities for disclosure items and disclosure types.*

Societal items (SO)	Mean weight of items disclosed	Mean weight of each type of disclosure				Total number of firms disclosing item
		Narrative	Monetary	Numerical	Both monetary and numerical	
SO2	7.92	4.91	6.35	6.50	7.58	1
SO8	7.81	5.49	6.98	6.99	7.90	11
SO1	7.67	4.61	6.53	6.04	7.97	60
SO10	7.52	5.06	5.87	6.22	7.43	25
SO4	7.41	5.11	6.10	6.55	7.55	3
SO7	7.35	5.45	6.12	6.36	7.38	23
SO9	7.26	4.79	5.58	6.09	7.32	7
SO3	7.24	5.06	5.74	6.57	7.34	0
SO6	6.94	4.88	6.21	6.09	7.33	1

SO5	6.22	4.88	5.46	5.73	6.44	0
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*Panel D*

*List of 9 product items and the mean importance weighted by customers for disclosure items and disclosure types*

Product items (PR)	Mean weight of items disclosed	Mean weight of each type of disclosure				Number of firms disclosing item
		Narrative	Monetary	Numerical	Both monetary and numerical	
PR1	8.08	5.22	6.14	6.58	7.68	83
PR5	8.07	6.30	6.17	7.08	7.76	42
PR9	7.8	5.61	6.56	6.70	8.09	7
PR8	7.77	5.97	6.02	6.64	7.11	0
PR3	7.71	5.88	5.43	6.09	6.74	133
PR7	7.64	5.56	5.62	6.49	7.35	16
PR6	6.98	6.05	5.68	5.60	5.89	133
PR2	6.94	5.57	5.63	6.21	6.53	6
PR2	6.62	5.59	5.28	5.57	6.13	0

**Table 2. Descriptive statistics**

Variables	Mean	SD	Min	Max
<i>Dependent variable</i>				
CSD_INDEX	0.10	0.05	0.03	0.23
<i>Four sub-categories of CSD – Additional analysis</i>				
LAD_INDEX	0.17	0.08	0.03	0.41
SOD_INDEX	0.04	0.05	0	0.23
PRD_INDEX	0.16	0.05	0.1	0.3
HRD_INDEX	0.01	0.04	0	0.25
<i>Independent variable</i>				
EQ	67.00	24.74	1.00	112.00
<i>Four earnings attributes to construct the standardized aggregate earnings quality score</i>				
AQ	0.06	0.06	0.00	0.40
PERSIS	-0.44	0.86	-2.80	4.78
PREDICT	0.07	0.07	0.01	0.40
SMOOTH	0.48	0.45	0.03	2.65
<i>Control variables</i>				
STATE	0.27	0.21	0.00	0.79
FOREIGN	0.12	0.14	0.00	0.49
AUDIT	0.16	0.37	0	1
ROA	0.08	0.08	-0.17	0.39
STOCK_EX	0.68	0.47	0	1
FEMALE	0.14	0.15	0.00	0.60

This table shows summary statistics for variables used in this paper. The final sample consists of 133 firms listed on Ho Chi Minh and Hanoi stock exchanges for the 2010 sample.

CSD\_INDEX = the stakeholder-driven, three-dimensional CSD index;

LAD\_INDEX = the stakeholder-driven, three-dimensional labor aspect disclosure index;

SOD\_INDEX = the stakeholder-driven, three-dimensional society aspect disclosure index;

PRD\_INDEX = the stakeholder-driven, three-dimensional product responsibility aspect disclosure index;

HRD\_INDEX = the stakeholder-driven, three-dimensional human rights aspect disclosure index;

EQ = the standardized aggregate earnings quality score, calculated as the average rank across the four individual measures (accruals quality, earnings persistence, earnings predictability, and earnings smoothness);  
 AQ, PESIS, PREDICT, SMOOTH = the values of accruals quality, earnings persistence, earnings predictability, and earnings smoothness, respectively;  
 STATE = the percentage of shareholding owned by the state;  
 FOREIGN = the percentage of shareholding owned by foreign investors;  
 AUDIT = 1 if firm's auditor is a Big 4 and 0 if otherwise;  
 ROA = net profit over the total assets;  
 STOCK\_EX = 1 if the firm is listed on HOSE and 0 for firms listed on HNX;  
 FEMALE = the percentage of female members in the board of directors.

**Table 3.**  
**The relationship between earnings quality and stakeholder-relevant CSD and the moderating effect of the ownership structure on this relationship.**

	CSD_INDEX (1)		CSD_INDEX (2)	
	Coeff.	p-value	Coeff.	p-value
<i>EQ</i>	0.0003*	0.079	0.0008***	0.007
<i>EQ x STATE</i>			-0.0015**	0.034
<i>EQ x FOREIGN</i>			-0.0012	0.295
<i>STATE</i>	-0.0056	0.763	0.0925*	0.063
<i>FOREIGN</i>	-0.0284	0.357	0.0379	0.604
<i>AUDIT</i>	0.0334***	0.002	0.0343***	0.001
<i>ROA</i>	0.1105**	0.046	0.1055*	0.054
<i>STOCK_EX</i>	0.0306***	0.000	0.0326***	0.000
<i>FEMALE</i>	0.0643***	0.010	0.0633***	0.010
Constant	0.0429	0.007	0.0080	0.727
R <sup>2</sup>	0.2507		0.2796	
Adjusted R <sup>2</sup>	0.2088		0.2268	
F statistic	5.98***		5.3***	
p-value	0.000		0.000	
Mean VIF	1.31		5.15	

The sample consists of 133 firms listed on Ho Chi Minh and Hanoi stock exchanges, each with a continuous listing history over the entire period from 2005 to 2011 for the 2010 sample. The p-values are calculated using standard errors corrected for heteroscedasticity. \*, \*\*, and \*\*\* denote significance levels at 10%, 5%, and 1%, respectively.

**Table 4.**  
**Stakeholder-relevant CSD and earnings quality: Excluding the accruals quality measure in the standardized aggregate earnings quality score.**

	CSD INDEX (1)		CSD INDEX (2)	
	Coeff.	p-value	Coeff.	p-value
<i>EQ_3ATTRI</i>	0.0003**	0.037	0.0007***	0.009
<i>EQ_3ATTRI x STATE</i>			-0.0012*	0.077
<i>EQ_3ATTRI x FOREIGN</i>			-0.0008	0.419
<i>STATE</i>	-0.0058	0.754	0.0717	0.130
<i>FOREIGN</i>	-0.0263	0.390	0.0196	0.770
<i>AUDIT</i>	0.0326***	0.002	0.0338***	0.001
<i>ROA</i>	0.1095**	0.043	0.1042*	0.053
<i>STOCK_EX</i>	0.0302***	0.000	0.0317***	0.000

<i>FEMALE</i>	0.0630***	0.010	0.0627**	0.011
Constant	0.0422***	0.004	0.0161	0.434
R <sup>2</sup>		0.2583		0.2789
Adjusted R <sup>2</sup>		0.2168		0.2261
F statistic		6.22***		5.29***
p-value		0.000		0.000
Mean VIF		1.28		4.59

*EQ\_3ATTRI* is the firm-specific standardized aggregate earnings quality score proxy, the average rank across three measures (*PERSIS*, *PREDICT*, and *SMOOTH*). The sample consists of 133 firms listed on Ho Chi Minh and Hanoi stock exchanges, each with a continuous listing history over the entire period from 2005 to 2011 for the 2010 sample. The p-values are calculated using standard errors corrected for heteroscedasticity. \*, \*\*, and \*\*\* denote significance levels at 10%, 5%, and 1%, respectively.

**Table 5.**  
**Earnings quality and labor and society aspects of stakeholder-relevant disclosure quality**

	LAD&SOD INDEX (1)		LAD&SOD INDEX (2)	
	Coeff.	p-value	Coeff.	p-value
<i>EQ</i>	0.0004*	0.061	0.0012***	0.005
<i>EQ x STATE</i>			-0.0019**	0.045
<i>EQ x FOREIGN</i>			-0.0021	0.165
<i>STATE</i>	0.0010	0.969	0.1276*	0.061
<i>FOREIGN</i>	-0.0132	0.754	0.1094	0.276
<i>AUDIT</i>	0.0334**	0.020	0.0341**	0.018
<i>ROA</i>	0.1525**	0.044	0.1450*	0.053
<i>STOCKEXCHANGE</i>	0.0347***	0.003	0.0381***	0.001
<i>FEMALE</i>	0.0909***	0.008	0.0909***	0.007
Constant	0.0402*	0.065	-0.0104	0.741
R <sup>2</sup>		0.2138		0.2445
Adjusted R <sup>2</sup>		0.1698		0.1892
F statistic		4.86***		4.42***
p-value		0.0001		0.000
Mean VIF		1.31		5.15

LAD&SOD\_INDEX represents society and labor aspects of the disclosure index (the dependent variable).