Governmental Ownership of Voluntary Sustainability Information Disclosure in an Emerging Economy: Evidence from Vietnam

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Abstract: Emerging economies have increasingly paid attention to sustainability issues in the business circle. However, few studies have explored what facilitates sustainability information disclosure. This study examines how corporate governance mechanisms, particularly government ownership, affect sustainability disclosure in an emerging economy—Vietnam. By combining related research streams, including stakeholder theory, institutional perspective, and principal–agent theory, we present a hypothesis on the effect of corporate governance on sustainability reporting. The logistic regression analysis and analysis of variance on 2678 Vietnamese sample firm-years from 2010 through 2016 indicate that government ownership is negatively associated with voluntary environmental and social information disclosure. Additionally, they demonstrate that ownership concentration tends to lower non-financial information disclosure, while individual largest shareholder has a positive effect. These findings provide managers and policymakers with theoretical and practical implications to encourage firms in emerging Asian economies such as Vietnam to adopt sustainability activities and disclose social information.

Keywords: sustainability management; sustainability information disclosure; government ownership; corporate governance; emerging economies

1. Introduction

Recent years have witnessed a growing demand for companies in emerging economies such as Vietnam, Malaysia, Thailand, China, and India to take sustainability issues seriously in their management practices [1]. The adoption and diffusion of sustainability practices by developing countries have been driven by internal and external factors. Internally, economic reform and resultant growth have caused some negative effects such as polarization and pollution problems [2]. Externally, globalization and the free flow of information have served as a catalyst for companies in these regions to do their businesses in a socially responsible and transparent manner [3]. For instance, China and Vietnam have attracted a large number of foreign enterprises after their economic reforms, which has led not only to economic growth, but also to the development of sustainability in the countries. Additionally, global supply chains have also played a pivotal role in diffusing sustainability. For the last two decades, these countries have emerged as world factories. Many export-oriented supply firms in these countries are increasingly being pushed by their global buyers to move beyond the regulations in their local markets to keep pace with the global trend of sustainability [4,5].

Companies may actively engage in sustainability programs either as a charity act or as a strategic driver, but unless they make an effort and choose the right means to communicate with
their stakeholders, sustainability efforts are not going to make any impact on their businesses [3]. Thus, sustainability information disclosure has been increasingly paid attention to as a vehicle to report on firms’ sustainability practices and communicate them with interested groups such as investors, government, local communities, and the media. For instance, according to the Governance & Accountability Institute Inc., 85% of S&P 500 index companies published sustainability reports in 2017. Companies can provide non-financial information via various means, either separate from the annual report, in a section of the annual report, or in other forms tailored for a wider group of stakeholders [6]. As sustainability information disclosure, which is usually on a voluntary basis, has spread as a norm through the business circle, particularly in the Western countries, academic researchers have explored the determinants of such voluntary information disclosure. Several previous studies have examined possible antecedents of voluntary sustainability information disclosure, both of internal drivers such as management intention and external drivers such as stakeholder pressure by employing various theories, including discretionary theory (e.g., [7]), legitimacy or stakeholder theory (e.g., [8,9]), and agency theory (e.g., [10]). However, research on this topic currently faces challenges on several levels.

First, various studies have addressed a plethora of subjects within the still-evolving field of sustainability and the realm of sustainability information disclosure. However, most of these discussions focus on the phenomenon in the context of Western countries [11]. Recent years have seen a growing number of studies that explore sustainability information disclosure issues in other cultural contexts, particularly in developing countries, but with a significant focus on China and India [2,3,6,12]. There is a still paucity of such research in the context of ASEAN countries. For instance, Vietnam’s GDP has dramatically increased by nearly ten times since its political and economic reform, namely “Doi Moi”, in 1986, and it has become one of the leading ASEAN countries, ranking 19th in the most attractive countries for foreign direct investment (FDI). Vietnam is now entering a period of economic growth, labor rights, business philanthropy, and the shouldering of obligations for stakeholders. However, since the idea of sustainability is relatively new in the case of Vietnam, little information has been reported on sustainability and related information disclosure in Vietnam [13].

Second, sustainability information disclosure is usually made on a voluntary basis, and thus, it is influenced by the choices and motives of management of the organizations in consideration of corporate governance mechanisms [14]. Although corporate governance and sustainability information disclosure have separately established themselves as well-researched areas, a link between these two research domains has received relatively little attention [15]. The scant literature on this topic suggests that sustainability communication with interested groups is likely to be associated with internal and external corporate governance mechanisms, such as ownership structure and board composition [16,17].

Third, one important gap in both corporate governance and sustainability literature is the deficit in the context of emerging economies [15]. Globalization and influx of FDI have led to the introduction of Western-style corporate governance models across the world. However, institutional differences in terms of legal, political, economic, and cultural aspects might impede the proliferation of corporate governance mechanisms in these regions [18–20]. For instance, even Vietnam’s remarkable economic reform is fundamentally based on the combination of the market and government, framed as “market-oriented socialist economy under state guidance”. Therefore, the influence of corporate governance mechanisms on sustainability disclosures can be different in emerging economies, particularly in the Vietnamese context.

Given these gaps in the literature, this study examines the effect of corporate governance mechanisms on sustainability information disclosure in Vietnam during the period 2010–2016. In particular, we focus on the effect of government ownership. Vietnam is in an early stage of sustainability and information disclosure. Like other emerging economies, it has also adopted Western-style corporate governance mechanisms, but a majority of Vietnamese companies are still
greatly influenced by the government, which attracts the attention of academic researchers towards 
the relationship between corporate governance and sustainability disclosure in Vietnam.

This study contributes to the existing literature in three distinct and important ways. First, 
by providing evidence that government ownership offers fewer incentives to implement a high level 
of sustainability disclosure in the Vietnamese context, it offers empirical support for institutional 
and stakeholder theories as plausible explanations for antecedents of social information disclosure. 
This study finds that ownership concentration is also negatively associated with sustainability disclosure, 
which confirms the argument of [10]. The results of this study also imply that companies with high 
individual investors as the largest shareholder disclose more sustainability information as a proactive 
legitimacy strategy to satisfy general shareholders having a diverse range of expectations. Overall, 
this study suggests that similar to the situation in many developed countries, companies in emerging 
economies such as Vietnam likely disclose more sustainability information as more stakeholders are 
engaged in corporate governance.

Second, this study is one of the first studies to report sustainability information disclosure in 
Vietnam. Since its economic reform, Vietnam has attracted many global companies and investors 
seeking a competent production base and promising investments, respectively. Vietnam has received 
increasing attention from management scholars, particularly finance and corporate governance scholars, 
because of its distinctive business atmosphere, combining Western-style capitalism and socialism [21]. 
This study helps researchers and practitioners better understand sustainability disclosure issues in this 
intriguing Vietnamese business context.

Third, the results of this study raise an interesting debate about the role of the government in 
firms’ sustainability disclosure, which awaits future research. Our findings suggest that government 
ownership likely lowers non-financial information disclosure, which is quite in contrast with the 
findings of some previous studies supporting a positive relationship between them [22–24]. These 
mixed results can deepen our understanding on how and in which condition the government can 
facilitate or hamper sustainability information disclosure. The Vietnamese context of this study 
contributes to elaborate on such a relationship by considering intervening or contingent variables. 
Overall, we extend the sustainability literature by providing empirical evidence of determinants of 
sustainability disclosure in an emerging economy context.

The rest of this paper is organized as follows: Section 2 presents a brief on the institutional context 
of sustainability and information disclosure in Vietnam. Section 3 provides a synthesis of relevant 
theories of sustainability information disclosure and presents the hypothesis about the relationship 
between government ownership and sustainability disclosure. Section 4 describes the research method, 
and Section 5 presents the results of the empirical analysis and managerial and policy implications. 
Section 6 provides a research summary and some interesting avenues for future research.

2. Institutional Context and Sustainability Reporting in Vietnam

After suffering from a very difficult economic period of hyperinflation and economic stagnation 
in the mid-1980s [21], Vietnam made a historical decision to launch economic reforms, named as ‘Doi Moi’, with the principle of “market-oriented socialist economy under state guidance”. Since then, 
the Vietnamese economy has scaled up more than ten times. The Vietnam General Office of Statistics 
reports that the recent GDP growth rate reached 6.80% and 7.08% in 2017 and 2018, respectively.

There are some differences as well as similarities between Vietnam and other emerging economies 
in Asia in terms of corporate governance and sustainability management. First, the proportion 
of government-owned shares in firms in Vietnam is relatively high (57%, on average, among the 
privatized companies). The Enterprise Law 2005, which came into effect in 2006, mandated state-owned 
enterprises to be joint-stock companies or one-owner limited liability companies with 100% government 
ownership [25]. Thus, most companies are still greatly influenced by the government, although 
they have been open to the public. Second, similar to companies in the neighboring countries 
(e.g., Thailand [26] and Bangladesh [15]), most companies in Vietnam are either family owned
or are controlled by large shareholders (e.g., business groups or conglomerates). This indicates that management in many Vietnamese companies are effectively just extensions of the dominant ownerships, where the corporate boards are owner-driven. Consequently, the executive directors, CEO, and chairman of most of the companies are from the controlling shareholder’s family. Additionally, the influence of foreign investors is relatively weak compared with China and South Korea. On average, the fraction of foreign investors’ shares of the listed Vietnamese companies is 20.6% as of 2018 (c.f., 28.0% in China and 32.1% in South Korea).

In recent years, the Vietnamese government has started to pay attention to firms’ social and environmental issues. For instance, a new national strategy on Green Growth, which would guide its overall economic development plans, was announced in 2012. This strategy has initiated specific implementation plans of each ministry. In particular, the Ministry of Finance has devised an action plan for the Vietnamese finance sector to incorporate the concepts of green growth and sustainable development into finance by 2020. In 2015, the ministry revised the directive of “the guidelines for information disclosure in the financial market” (i.e., the Circular 155/2015/TT-BTC) by indicating that the listed companies are advised to provide relevant information about their plans, activities, and progress related to sustainable development. The guidelines specify a list of seven categories for sustainability information disclosure: management of raw material, energy and water consumption, compliance with environmental protection regulations, personnel policies, responsibility for local communities, and green financing activities guided by the State Securities Commission. In 2015, Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX) joined the Sustainable Stock Exchange (SSE) initiative. The initiative was launched in 2009 and was led by the United Nations Secretary General with the purpose of promoting responsible investment around the world. Since then, the listed companies in Vietnam have been increasingly pressured to release their social and non-financial information. Figure 1 presents a trend of sustainability information disclosure in Vietnam, showing a recent and dramatic increase of disclosure.

![Figure 1. Sustainability information disclosure in Vietnam.](image_url)

3. Theoretical Background and Hypothesis Development

This study explores the antecedents of sustainability information disclosure in Vietnam. We particularly focus on the effect of government ownership, because little information has been reported on social information disclosure in the context of the strong influence of the government on
listed companies. To clarify arguments, this study relies on stakeholder theory, institutional theory, principal–agent theory, studies on sustainability information disclosure in emerging economies, and a corporate governance perspective.

First, stakeholder theory has been one of the primary theoretical frameworks in the sustainability information disclosure literature [27]. Its central tenet is that firms should address various stakeholders’ concerns and demands to create value and achieve long-term survival [28]. Stakeholders’ expectations for sustainability disclosure have rapidly grown over the last thirty years, particularly in Western countries [1]. Through this disclosure practice, companies convey their attempts to address sustainability concerns, thus satisfying informational needs of stakeholders [29,30]. When incorporating stakeholder concerns into their accounting processes, companies usually prioritize the demands of the more powerful parties [31]. When it comes to sustainability information disclosure issues, financial investors and regulatory agencies are the most influential stakeholders of the firms. Investors have realized that protecting reputation and trust in society is central to preserving their investments and eventually assuring high returns. For instance, the Dow Jones Sustainability Index and the FTSE4Good Index, launched in 1999 and 2001, respectively, have urged global companies to adopt responsible best practices and disclose relevant information. However, the intensity of external pressure may vary according to country and such variations are particularly salient between developed and emerging markets [32]. Governments have a greater influence on companies in emerging economies; however, governmental concerns about sustainability disclosure in these regions is relatively lower than that in developed countries. For instance, while some European countries like Sweden, Denmark, and Germany require that listed companies with significant impact make their sustainability disclosures within their annual reports [6], there is little pressure from the governments in emerging economies for social information disclosure. Moreover, in the finance sector, responsible investment recently started with the launch of the FTSE4Good Emerging Index in 2016. Companies located in developing countries, where regulators, consumers, and financial investors do not necessarily impose the same extent of pressure on sustainability and/or sustainability information disclosure, tend to be pushed by global brand buyers [5]. Export-oriented companies are more bound to disclose non-financial reports to global stakeholders (i.e., buyers). Collectively, stakeholder theory predicts that the government’s excessive engagement in corporate governance might hamper sustainability information disclosure, particularly in emerging economies, in which the society has only begun being concerned with sustainability. The Vietnamese economy is in the transition period of privatization since its economic reform of “market-oriented socialist economy”. The government’s influence on Vietnamese companies is much stronger compared with other emerging economies [25]. The government is perceived as the most powerful stakeholder of companies in Vietnam, which can lower the motivation for non-financial reporting.

Second, institutional theory, which has been used interchangeably with stakeholder theory and legitimacy theory to explain sustainability motivations [33], links firms’ practices to the norms of the society in which they operate. It views a firm’s voluntary sustainability disclosure as a part of institutional practice to maintain, gain, and regain its legitimacy [34]. Through isomorphic processes such as coercion, imitation, and normative pressures, firms adopt institutional practices [35]. The need to allay concerns about threats to organizational legitimacy has largely acted as a potential driving force for sustainability disclosure.

Coercive isomorphism relates to external forces, such as shareholder influence, customer demands, and government policy. This process arises from the pressure by powerful or critical stakeholders to change the firm’s institutional practices, such as sustainability reporting [34]. This process is quite similar to the managerial perspective of stakeholder theory focusing on powerful stakeholders. Some companies could be more coerced into pursuing their existing voluntary sustainability disclosure practices than others. In emerging economies, the characteristics of large shareholders and customers, such as government ownership and foreign buyers, can result in a difference in coercive isomorphism process, which in turn leads to different forms of institutions (i.e., sustainability information disclosure versus non-disclosure). Mimetic isomorphism involves firms trying to emulate others’ innovative
practices. When business uncertainty is high, such imitation is much enacted because doing the same thing as others is believed to minimize risks and convey legitimacy. Uncertainty usually increases as companies are exposed to global competition and more shareholders are engaged in corporate governance. Therefore, companies in more competitive circumstances likely adopt voluntary information disclosure because it is an innovative practice [33]. Conversely, companies under government protection in emerging economies do not necessarily mimic new (and thus, less familiar) practices such as sustainability information disclosure. Normative isomorphism relates to the pressure emerging from common values to adopt particular institutional practices. In terms of voluntary reporting practices, normative isomorphic pressures could arise from less formal group influences, such as social network of professional managers’ society [34]. In emerging economies, managers exposed to westernized peer culture, which is more transparent and open to the public, tend to be pressured to embrace voluntary non-financial information disclosure practice as the norm. Collectively, all three institutional processes predict that Vietnamese companies likely adopt voluntary sustainability information disclosure practices as they are less affected by the largest shareholder (e.g., government) and engage various shareholders in their governance mechanisms.

The third research stream of this study explores the effect of corporate governance on voluntary information disclosure through a principal–agent lens. Major shareholders have sufficient resources and incentives to monitor and check management decisions [36]. By contrast, dispersed minority shareholders have difficulty in effectively supervising managers’ behavior due to free-riding problems. Concerns regarding major shareholders and concentrated ownership may arise when they use their controlling power in their own interest, which in turn expropriates the minority shareholders [37,38]. Differences in corporate governance systems between companies in emerging economies and those in developed Western economies have been reported quite often. For instance, owner-managers, family dominance, and ownership concentration are more common in Asian companies [15,39,40]. For this type of company, public responsibility may be less of an issue because outsiders’ interests are relatively low, which results in the Type II agency problem. Conversely, a largely dispersed ownership structure is more effective in reducing information asymmetry problems [41], and thus contributes to increased pressure for voluntary disclosures [1,29,42,43]. Moreover, investor protection through sound corporate governance facilitates firms in incorporating non-financial information into the annual report [10]. In terms of good corporate governance, Vietnam has a low level of investor protection systems. These arguments also support our conjecture that concentrated ownership, particularly the government as the largest shareholder, might hamper voluntary sustainability information disclosure practices.

Another stream of studies has examined the effect of governmental ownership on voluntary information disclosure in specific country settings such as emerging economies. These studies have provided mixed results. For instance, Said et al. [44] and Hu et al. [23] report that government ownership is positively associated with sustainability disclosure in Malaysia and China, respectively, while Li et al. [16] and Zheng and Zhang [45] do not find any significant relationship between state ownership and non-financial information disclosure in the Chinese context.

Based on this reasoning, which uses a mixture of stakeholder theory, institutional theory, principal–agent theory and corporate governance, and existing empirical studies in emerging economies, we propose the following hypothesis.

**Hypothesis 1 (H1).** Government ownership is negatively associated with voluntary sustainability information disclosure in Vietnam.

4. Research Methodology

4.1. Variables and Measure

This study examines the effect of government ownership on sustainability information disclosure in Vietnam. First, we employed a binary measure for the dependent variable—voluntary sustainability
information disclosure—following previous studies [16,17]. If a firm provides corporate information covering environment, society, and governance issues either as separate reports (e.g., sustainability report) or as integrated annual reports, it is considered a “reported firm” (coded as SUSR = 1). Second, this study measures government ownership (GOV) as the percentage of government shareholding [44,46], coded as GOV. Besides, we use dummy variable GOVD, which represents whether the government owns shares [24,47,48]. Regarding corporate governance, the proportion of the largest shareholder (CONTROL) and other three dummy variables (i.e., the government as the largest shareholder, institutional investor as the largest shareholder, and individual investor as the largest shareholder) are included. Third, we use certain control variables that are most likely to affect any sample of firms’ voluntary information disclosure. Profitability is one of the most powerful explainers for information disclosure [49,50]. Firms with superior upcoming earnings performance have a higher disclosure propensity to reveal their “good news” to financial markets [51]. In this study, we used earnings before income tax/net sales (EBITNS) as a proxy. ROA and ROE were also used for testing robustness. In contrast, leverage is likely to be negatively associated with voluntary sustainability disclosure [47].

We controlled leverage by measuring the debt-to-equity ratio. Firm size is measured as a natural logarithm of net sales. Larger firms are more likely to disclose sustainability information [43,44]. There are several alternative indicators for firm size, such as total assets, market capitalization, and the number of employees. Dang et al. [52] argue that firm size can be measured differently according to research orientation. Accordingly, this study employed net sales as a proxy for firm size to reflect better a product-market context in Vietnam. We conducted a robustness test by replacing net sales with total assets, indicating little difference in the results of the analysis. Market-to-book ratio was also controlled because highly evaluated firms in financial markets tend to report non-financial information to reduce agency costs and provide a good signal to investors [53]. This study also controlled the listing period of a firm [27] because it can affect the firm’s discretionary decision to disclosure non-financial information [16]. Moreover, industry and year were included as dummies to control for the effects of systemically different contexts. Table 1 summarizes the variables and measurements used in this study.

Table 1. Measurement of variables.

| Variable                        | Code    | Expected Correlation | Measurement                                                                 |
|---------------------------------|---------|----------------------|-----------------------------------------------------------------------------|
| Dependent                       |         |                      |                                                                             |
| Sustainability information disclosure | SUSR    | +                    | 1 if a firm reports sustainability information during the sample periods; else 0 |
| Independent                     |         |                      |                                                                             |
| Government ownership            | GOV     | -                    | Fraction of the government’s holding shares                                  |
| Government ownership (dummy)    | GOVD    | -                    | 1 if GOV > 0; else = 0                                                       |
| Control                         |         |                      |                                                                             |
| Profitability                   | EBITNS  | +                    | EBIT/net sales                                                               |
| Leverage                        | LEV     | -                    | Total debt/total equity                                                      |
| Firm size                       | SIZE    | +                    | Logarithm of net sales                                                       |
| Market-to-book ratio            | MB      | +                    | Market value of share/book value of share                                    |
| Age                             | AGE     | +                    | Listing periods (years since IPO)                                            |
| Others (for robustness test)    |         |                      |                                                                             |
| Largest shareholder             | CONTROL | -                    | Fraction of the largest shareholder                                         |
| Government largest              | GOVL    | -                    | 1 if the government is the largest shareholder; else = 0                     |
| Institutional investor largest  | INSL    | +                    | 1 if institutional investor is the largest shareholder; else = 0             |
| Individual investor largest     | INDL    | +                    | 1 if individual investor is the largest shareholder; else = 0               |
| Profitability                   | ROA (ROE) | +                   | Net profits/Total asset (Net profits/Total equity)                           |
4.2. Sample and Datasets

This study compiled a dataset from publicly traded Vietnamese firms registered at Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX) from 2010 to 2016. As of July 2018, a total of 699 companies excluding the financial sector, were listed on the Vietnam State Securities Commission. This study winsorizes the dataset at the level of 1% and 99% to eliminate outliers. We hand-collected data because of insufficient reliable financial data services in Vietnam. This study used several sources to compile a dataset: the website of each company for audited financial statements and sustainability information, economic-financial information service for stock prices (www.cafef.vn), and the annual reports of State Capital and Investment Corporation for government ownership data. Excluding companies in the financial sector and data that was not available during the sample period; we identified 374 listed companies for the study sample. Among the sample, 48.1% belong to HOSE while 51.9% belong to HNX. A total of 2678 firm-years were compiled for the analysis. Table 2 presents a summary of the sample.

Table 2. Time distribution of sample.

| Year | Sustainability Information Disclosure |
|------|--------------------------------------|
|      | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total |
| Disclosure (SUSR = 1) | 19 | 24 | 25 | 35 | 45 | 106 | 189 | 435 |
| Non-disclosure (SUSR = 0) | 355 | 350 | 349 | 339 | 329 | 268 | 185 | 2175 |
| Total | 374 | 374 | 374 | 374 | 374 | 374 | 374 | 2618 |

4.3. An Empirical Test Model

To test our hypothesis, we employed a logistic regression model. This study examines the effect of government ownership on sustainability information disclosure. The dependent variable (SUSR) is a binary measure, while the independent variable is a ratio measure. We coded one if a company reported any sustainability information within its annual report and otherwise coded zero. Logistic regression is known to be the most suitable analysis method in this research setting.

The following econometric model tests the effect of government ownership on sustainability information disclosure.

\[
\log \left( \frac{P_i}{1 - P_i} \right) = \beta_0 + \beta_1 \text{GOV}_{it} + \beta_2 \text{EBITNS}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{MB}_{it} \\
+ \beta_6 \text{AGE}_{it} + \text{year dummies} + \text{industry dummies} + \epsilon_{it}
\]  

(1)

Here, \(P_i\) represents the probability of a firm \(i\) disclosing sustainability information in year \(t\). \(\text{GOV}_{it}\) indicates government ownership while \(\text{EBITNS}_{it}, \text{LEV}_{it}, \text{SIZE}_{it}, \text{MB}_{it}\), and \(\text{AGE}_{it}\) are control variables. This model includes year and industry as dummies. The sampled companies were classified into 20 industry sectors (Table 3). This study used Stata 13.0 for our statistical analyses.

Table 3. Demographics of the responses.

| Industry            | Case (%) | Industry | Case (%) |
|---------------------|----------|----------|----------|
| Construction        | 56 (15.0%) | Plastic | 16 (4.3%) |
| Building materials  | 31 (8.3%) | Trade    | 15 (4.0%) |
| Manufacturing       | 29 (7.8%) | Energy   | 15 (4.0%) |
| Real estate         | 29 (7.8%) | Seafood  | 12 (3.2%) |
| Transportation      | 26 (7.0%) | Investment | 12 (3.2%) |
| Food                | 23 (6.2%) | Tourism  | 11 (2.9%) |
| Education services  | 22 (5.9%) | Rubber   | 9 (2.4%)  |
| Telecommunication   | 18 (4.8%) | Steel    | 9 (2.4%)  |
| Minerals            | 17 (4.6%) | Oil and gas | 6 (1.6%)  |
| Pharmaceutical      | 16 (4.3%) | Fertilizer | 2 (0.5%)  |
5. Results and Discussion

5.1. Descriptive Analysis

Table 4 represents the descriptive statistics for the variables used in this study. The average of sustainability disclosure is 0.169, indicating that 16.6% of the sample reported their sustainability activities during the research period. The average of government ownership (GOV) is 22.9%. The government owns 59.7% of the sample in Vietnam.

Table 4. Descriptive statistics of variables.

| Variable | N   | Mean | S.D. | Min  | Max  |
|----------|-----|------|------|------|------|
| SUSR     | 2618| 0.166| 0.375| 0.000| 1.000|
| GOV      | 2597| 0.229| 0.236| 0.000| 0.795|
| GOVD     | 2618| 0.597| 0.491| 0.000| 1.000|
| EBITNS   | 2565| 0.122| 0.136| −0.321| 0.944|
| LEV      | 2565| 1.528| 1.417| 0.054| 8.098|
| SIZE     | 2566| 26.944| 1.427| 23.186| 30.665|
| MB       | 2566| 1.845| 1.531| 0.260| 9.150|
| AGE      | 2576| 10.393| 3.376| 4.000| 23.000|
| CONTROL  | 2570| 0.349| 0.184| 0.052| 0.796|
| GOVL     | 2618| 0.527| 0.499| 0.000| 1.000|
| INSL     | 2618| 0.257| 0.437| 0.000| 1.000|
| INDL     | 2618| 0.216| 0.412| 0.000| 1.000|

SUSR: sustainability information disclosure, GOV: government ownership, GOVD: government ownership dummy, EBITNS: earnings before income tax/net sales, LEV: leverage, SIZE: firm size, MB: market-to-book value ratio, AGE: listing periods, CONTROL: largest shareholder, GOVL: government largest shareholder dummy, INSL: institutional investor largest shareholder dummy, INDL: individual investor largest shareholder dummy.

Table 5 presents the correlation matrix among the variables. Sustainability information disclosure (SUSR) is negatively correlated with government ownership (GOV) and governmental ownership dummy (GOVD) at the 0.01 cut-off level, which is very much consistent with our hypothesis. SUSR is positively associated with profitability (EBITNS), firm size (SIZE), market-to-book value ratio (MB), and years of the listing period (AGE) at the 0.01 significant level but negatively correlated with debt ratio (LEV) at the 0.1 cut-off level. These results of the correlation analysis generally support our expectations. Companies that are larger, more profitable, evaluated as promising in the capital market, and more tenured at the stock exchange are likely to report non-financial information, while those with higher debts seem reluctant towards sustainability information disclosure.

We used t-test to investigate differences in government ownership and other key control variables between the sustainability information disclosure group (SUSR = 1) and non-disclosure group (SUSR = 0). Table 6 reports the mean values of the explanatory variables, which indicate the differences between the two groups. Government ownership is significantly lower in the disclosure group than that in the non-disclosure group at the 0.01 cut-off level. This analysis also shows that control variables such as profitability (EBITNS), firm size (SIZE), market-to-book value ratio (MB), listing period (AGE), and leverage (LEV) differ significantly between both groups. These results are very much consistent with those of Spearman’s correlation analysis (Table 5).
### Table 5. Correlation matrix.

|       | SUSR | GOV  | GOVD | EBITNS | LEV  | SIZE | MB   | AGE  | CONTROL | GOVL | INSL | INDL |
|-------|------|------|------|--------|------|------|------|------|---------|------|------|------|
| SUSR  | 1.000|      |      |        |      |      |      |      |         |      |      |      |
| GOV   | -0.081 *** | 1.000|      |        |      |      |      |      |         |      |      |      |
| GOVD  | -0.108 *** | 0.873 *** | 1.000|        |      |      |      |      |         |      |      |      |
| EBITNS| 0.083 *** | 0.034 | 0.055 *** | 1.000|      |      |      |      |         |      |      |      |
| LEV   | -0.040 *  | 0.079 *** | 0.033 | -0.274 *** | 1.000|      |      |      |         |      |      |      |
| SIZE  | 0.261 *** | 0.087 *** | 0.006 | -0.129 *** | 0.330 *** | 1.000|      |      |         |      |      |      |
| MB    | 0.218 *** | 0.008 | 0.039 *  | 0.361 *** | -0.195 *** | 0.255 *** | 1.000|      |         |      |      |      |
| AGE   | 0.213 *** | -0.184 *** | -0.093 *** | -0.076 *** | -0.138 *** | -0.055 *** | 0.125 *** | 1.000|         |      |      |      |
| CONTROL| -0.007 | 0.625 *** | 0.343 *** | -0.021 | 0.107 *** | 0.169 *** | 0.035 *  | -0.202 *** | 1.000|      |      |      |
| GOVL  | -0.088 *** | 0.874 *** | 0.872 *** | 0.047 **  | 0.040 *  | -0.016 | -0.018 | -0.143 *** | 0.421 *** | 1.000|      |      |      |
| INSL  | 0.046 **  | -0.533 *** | -0.519 *** | -0.005 | -0.075 *** | 0.016 | 0.078 *** | 0.101 *** | -0.066 *** | -0.630 *** | 1.000|      |      |      |
| INDL  | 0.059 *** | -0.503 *** | -0.515 *** | -0.053 *** | 0.031 | 0.003 | -0.062 *** | 0.067 *** | -0.447 *** | -0.554 *** | -0.298 *** | 1.000|

*SUSR*: sustainability information disclosure, *GOV*: government ownership, *GOVD*: government ownership dummy, *EBITNS*: earnings before income tax/net sales, *LEV*: leverage, *SIZE*: firm size, *MB*: market-to-book value ratio, *AGE*: listing periods, *CONTROL*: largest shareholder, *GOVL*: government largest shareholder dummy, *INSL*: institutional investor largest shareholder dummy, *INDL*: individual investor largest shareholder dummy. *p < 0.1; **p < 0.05; ***p < 0.01.
Table 6. Results of the t-test.

| Variable | Sustainability Information Disclosure (SUSR = 1) | Sustainability Information Non-Disclosure (SUSR = 0) | Difference | t-Value |
|----------|-------------------------------------------------|--------------------------------------------------|------------|---------|
| GOV      | 0.1919                                          | 0.2370                                           | 0.0451     | 3.652 ***|
| EBITNS   | 0.1392                                          | 0.1179                                           | −0.0212    | −2.968 **|
| LEV      | 1.3635                                          | 1.5612                                           | 0.1976     | 2.656 **|
| SIZE     | 27.8342                                         | 26.7719                                          | −1.0622    | −14.434 ***|
| MB       | 2.7276                                          | 1.6732                                           | −1.0544    | −13.308 ***|
| AGE      | 12.0993                                         | 10.0485                                          | −2.0508    | −11.837 ***|

GOV: government ownership, EBITNS: earnings before income tax/net sales, LEV: leverage, SIZE: firm size, MB: market-to-book value ratio, AGE: listing periods. ** p < 0.05; *** p < 0.01.

5.2. Logistic Regression Analysis: The Effect of Government Ownership on Sustainability Information Disclosure

We analyzed the data using logistic regression to assess the marginal predictive contribution of the theoretical variable (i.e., government ownership) over and above that of the control variables. Table 7 presents the results of the test of Hypothesis 1, which predicts a negative relationship between government ownership and sustainability disclosure in Vietnam.

Table 7. Results of regression analysis.

| Variable     | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------|---------|---------|---------|---------|
| Constant     | −23.547 *** | −23.197 *** | −23.109 *** | −23.080 *** |
| (1.585)      | (2.094)  | (1.563)  | (2.069)  |
| GOV          | −0.631 *** | −0.809 ** |         |         |
| (0.277)      | (0.339)  |         |         |         |
| GOVD         |         | −0.599 *** | −0.440 *** |         |
|             |         | (0.127)  | (0.154)  |         |
| EBITNS       | 1.401 *** | 2.915 *** | 1.418 *** | 2.852 *** |
| (0.5)        | (0.663)  | (0.503)  | (0.659)  |         |
| LEV          | −0.109 ** | −0.176 *** | −0.120 ** | −0.182 *** |
| (0.054)      | (0.067)  | (0.053)  | (0.066)  |         |
| SIZE         | 0.711 *** | 0.821 *** | 0.701 *** | 0.813 *** |
| (0.056)      | (0.074)  | (0.055)  | (0.073)  |         |
| MB           | 0.172 *** | 0.117 ** | 0.178 *** | 0.123 ** |
| (0.04)       | (0.049)  | (0.040)  | (0.049)  |         |
| AGE          | 0.199 *** | 0.027    | 0.2 ***   | 0.039   |
| (0.02)       | (0.028)  | (0.019)  | (0.028)  |         |
| Year dummies | No      | Yes     | No      | Yes     |
| Industry dummies | No   | Yes     | No      | Yes     |
| No. of cases | 2377    | 2370    | 2398    | 2391    |
| Pseudo-R²    | 19.63%  | 34.38%  | 20.50%  | 34.74%  |

GOV: government ownership, GOVD: government ownership dummy, EBITNS: earnings before income tax/net sales, LEV: leverage, SIZE: firm size, MB: market-to-book value ratio, AGE: listing periods. ** p < 0.05; *** p < 0.01.

In Model 1, we find a negative significant coefficient (β = −0.631, p < 0.05) of corporate governance (GOV) after controlling for all the variables known to affect sustainability information disclosure. This negative association remains unchanged when year and industry effects are controlled (Model 2). These results imply that higher government ownership results in lower possibility of sustainability information disclosure, thus supporting our hypothesis. Models 3 and 4 use a binary measure of government ownership dummy as the independent variable. The negative associations (β = −0.599, p < 0.01 and β = −0.440, p < 0.01 for Models 3 and 4, respectively) indicate that government ownership, regardless of its extent, has a negative effect on non-financial disclosure.
Regarding control variables, we find that profitability (EBITNS) and firm size (SIZE) increase sustainability information disclosure, consistent with the results of previous studies \[29,49,54\]. Higher stock value measured as market-to-book value ratio (MB) is also positively related to voluntary information disclosure as reported by Bae et al. \[55\]. In contrast, debt ratio (LEV) has a negative effect, which also supports the evidence in the literature \[56\]. It is noteworthy that this study finds evidence of a positive relationship between listing period (i.e., how long a firm has been listed at the stock exchange market) and information disclosure. Previous studies have provided mixed results. For instance, Roberts \[27\] argues that firms listed for longer likely report more information because they are more exposed to outside stakeholders whereas Li et al. \[16\] present empirical evidence of a negative relationship. The results of this study support stakeholder theory by providing evidence that is very much consistent with Roberts’s argument.

This study re-examines the effect of government ownership on sustainability information disclosure in consideration of ownership concentration. First, we compiled 2377 data that the government had ownership of a listed company. Then, we split this sample into two parts: a subset of the sample in which the government is the largest shareholder (GOVL = 1) and another in which the government is not the largest shareholder (GOVL = 0). This study defined the largest shareholder as a shareholder who owns more than 5 percent and shares the largest portion. Table 8 presents the results of logistic regression model for each sub-sample. The effect of government ownership on sustainability information disclosure is only significant when the government is not the largest shareholder (Model 6). Once the government owns the largest portion of shares of a listed company, variation of government ownership is very limited, and thus, its impact becomes less significant. Conversely, this result acts as strong evidence for our hypothesis by indicating that, with a small portion of shares, government ownership lessens firms’ motivation for non-financial information disclosure.

**Table 8.** Results of regression analysis considering government ownership concentration.

| Dependent Variable: Sustainability Information Disclosure | Model 5 (GOVL = 1) | Model 6 (GOVL = 0) |
|-----------------------------------------------------------|-------------------|-------------------|
| Constant                                                 | −24.006 ***       | −22.997 ***       |
|                                                          | (2.382)           | (2.175)           |
| GOV                                                      | −1.200            | −8.762 ***        |
|                                                          | (0.844)           | (2.564)           |
| EBITNS                                                   | 0.880             | 3.919 ***         |
|                                                          | (1.231)           | (0.924)           |
| LEV                                                      | −0.095            | −0.191 **         |
|                                                          | (0.127)           | (0.086)           |
| SIZE                                                     | 0.635 ***         | 0.946 ***         |
|                                                          | (0.120)           | (0.109)           |
| MB                                                       | 0.358 ***         | 0.015             |
|                                                          | (0.094)           | (0.064)           |
| AGE                                                      | −0.100 *          | 0.093 **          |
|                                                          | (0.060)           | (0.037)           |
| Year dummies                                             | Yes               | Yes               |
| Industry dummies                                         | Yes               | Yes               |
| No. of cases                                             | 1280              | 1097              |
| No. of cases                                             |                   |                   |
| Pseudo-R²                                                 | 20.85%            | 20.57%            |

GOVL: government largest shareholder dummy, GOV: government ownership, EBITNS: earnings before income tax/net sales, LEV: leverage, SIZE: firm size, MB: market-to-book value ratio, AGE: listing periods. * \( p < 0.1 \); ** \( p < 0.05 \); *** \( p < 0.01 \).

This study examines the effect of the largest shareholder on sustainability information disclosure by using the same logistic regression analysis. We regress the natural logarithm of sustainability
disclosure odd ratio onto the portion of the largest shareholder, government largest shareholder dummy, institutional investor largest shareholder dummy, and individual largest shareholder dummy (Table 9). The results show that the portion of shares held by the largest shareholder (CONTROL) might have a tendency to lower sustainability information disclosure; however, this relationship is only significant in the sub-sample group where “GOVD=1”. This study does not find evidence in the Vietnamese context to support the literature on agency theory, arguing that ownership concentration has a negative effect on voluntary information disclosure. In other words, dispersion of ownership facilitates sustainability reporting [12,29,43]. However, this analysis provides an intriguing result, that the government as the largest shareholder (GOVL) likely lowers sustainability information disclosure while an individual as the largest shareholder (INDL) increases firms’ voluntary reporting. This result implies that the government’s influence is more critical for non-financial information disclosure in Vietnam than any other corporate governance factors such as ownership concentration.

Table 9. The effect of largest shareholder on sustainability information disclosure.

| Dependent Variable: Sustainability Information Disclosure | Model 7 | Model 8 | Model 9 | Model 10 | Model 11 |
|----------------------------------------------------------|--------|--------|--------|---------|---------|
| Constant                                                 | -23.019 *** | -24.3 *** | -22.973 *** | -23.13 *** | -23.142 *** |
| (2.715)                                                  | (2.724) | (1.555) | (1.555) | (1.553) |
| EBITNS                                                   | 2.918 *** | 3.922 *** | 1.311 *** | 1.266 **  | 1.267 **  |
| (0.895)                                                  | (0.913) | (0.498) | (0.496) | (0.496) |
| LEV                                                      | -0.297 *** | -0.194 **  | -0.121 **  | -0.119 **  | -0.121 **  |
| (0.115)                                                  | (0.085) | (0.054) | (0.054) | (0.054) |
| SIZE                                                     | 0.863 *** | 0.876 *** | 0.692 *** | 0.689 *** | 0.687 *** |
| (0.1)                                                    | (0.098) | (0.055) | (0.055) | (0.055) |
| MB                                                       | 0.178 *** | 0.183 *** | 0.187 *** | 
| (0.039)                                                  | (0.04) | (0.039) | 
| AGE                                                      | 0.197 *** | 0.04 ***  | 0.202 *** |
| (0.02)                                                   | (0.02) | (0.019) | 
| CONTROL                                                 | -1.415 **  | 0.414 |
| (0.672)                                                  | (0.6) | |
| GOVL                                                     | 0.328 *** | (0.127) |
| (1)                                                      | |
| INSL                                                     | 0.086 |
| (0.142)                                                  | |
| INDL                                                      | 0.362 **  | (0.147) |
| (1)                                                      | |
| GOVD                                                     | 1 |
| Year dummies                                             | Yes |
| Industry dummies                                         | Yes |

| No. of cases | 959 | 1442 | 2398 | 2398 | 2398 |
|--------------|-----|-----|-----|-----|-----|
| Pseudo-R²    | 34.10% | 38.52% | 19.76% | 19.45% | 19.72% |

EBITNS: earnings before income tax/net sales, LEV: leverage, SIZE: firm size, MB: market-to-book value ratio, AGE: listing periods, CONTROL: largest shareholder, GOVL: government largest shareholder dummy, INSL: institutional investor largest shareholder dummy, INDL: individual investor largest shareholder dummy, GOVD: government ownership dummy. ** p < 0.05; *** p < 0.01.

5.3. Robustness Test

We report the results of additional tests conducted to determine the robustness of our main findings. First, this study focuses on measuring sustainability information disclosure at different points in time. We regressed time-lagged sustainability disclosure (i.e., SUSRₜ) on government ownership (GOVₓ₋₁) and government ownership dummy (GOVDₓ₋₁). Second, we added two other proxies for profitability (i.e., return on asset and return on equity). Table 10 presents the results, which are consistent with the previous results. Model 11 and Model 12 suggest that government ownership influences time-lagged sustainability information disclosure at the 0.05 cut-off level. This result clearly
supports our hypothesis. The effects of key control variables on time-lagged sustainability reporting are also as indicated by the results of previous analysis in this study. Profitability (EBITNS), firm size (SIZE), and stock value (MB) have a positive effect on sustainability disclosure one year later while leverage (LEV) has a negative effect. A different result is found regarding the effect of listing period (AGE) on one year-lagged sustainability reporting, indicating that the effect is not significant. Model 13 and Model 14 also provide the same results. While ROA and ROE are shown to be positively associated with sustainability reporting, the negative significant effect of government ownership remains unchanged. Collectively, this analysis with time lag and other profitability measures confirms the robustness of the previous analysis, which provides evidence that strongly supports our hypothesis.

Table 10. Results of robustness test.

|                          | Model 11         | Model 12         | Model 13         | Model 14         |
|--------------------------|------------------|------------------|------------------|------------------|
| Constant                 | −22.502 ***      | −22.341 ***      | −21.909 ***      | −21.369 ***      |
|                          | (2.108)          | (2.086)          | (1.928)          | (1.947)          |
| GOVt−1                   | −0.765 **        | −0.958 **        | −0.880 ***       |                  |
|                          | (0.341)          | (0.337)          | (0.337)          |                  |
| GOVDt−1                  |                  | −0.377 ***       |                  |                  |
|                          |                  | (0.156)          |                  |                  |
| EBITNS,t−1               | 2.809 ***        | 2.800 ***        |                  |                  |
|                          | (0.666)          | (0.661)          |                  |                  |
| ROAt−1                   |                  |                  | 4.949 ***        | 2.523 ***        |
|                          |                  |                  | (1.455)          | (0.844)          |
| ROEt−1                   |                  |                  |                  |                  |
| LEV                      | −0.213 ***       | −0.213 ***       | −0.211 **        | −0.284 ***       |
|                          | (0.071)          | (0.070)          | (0.072)          | (0.068)          |
| SIZE                     | 0.798 ***        | 0.789 ***        | 0.786 ***        | 0.768 ***        |
|                          | (0.075)          | (0.074)          | (0.068)          | (0.070)          |
| MB                       | 0.112 **         | 0.118 **         |                  |                  |
|                          | (0.055)          | (0.055)          |                  |                  |
| AGE                      | 0.029            | 0.038            | 0.027            | 0.032            |
|                          | (0.028)          | (0.028)          | (0.027)          | (0.027)          |
| Year dummies             | Yes              | Yes              | Yes              | Yes              |
| Industry dummies         | Yes              | Yes              | Yes              | Yes              |
| Number of cases          | 2054             | 2072             | 2066             | 2070             |
| Pseudo-R²                | 33.09%           | 33.41%           | 31.77%           | 31.53%           |

GOV: government ownership, GOVD: government ownership dummy, EBITNS: earnings before income tax/net sales, ROA: return on asset, ROE: return on equity, LEV: leverage, SIZE: firm size, MB: market-to-book value ratio, AGE: listing periods. ** p < 0.05; *** p < 0.01.

6. Conclusions

6.1. Research Summary and Implications

This study examines the influence of government ownership on sustainability information disclosure in an Asian developing economy, Vietnam. This country is quite an intriguing place to explore sustainability and related voluntary information disclosure issues because its economic, political, and legal structures are much different from those of the Western economies, and thus, it has a dynamic nature of an emerging economy. Particularly, it is a mixture of capital market and government control.

Unlike Western companies and companies in other ASEAN countries, government ownership is very common in Vietnam. In such a setting, the influence of government ownership on sustainability disclosure is likely to be different from that in developed and other emerging economies.
This study finds that government ownership is negatively related to voluntary sustainability information disclosure, which is consistent with our expectation. We also document that government ownership, regardless of the extent of ownership concentration by the government, drives companies to be less involved in responsible activities because of the government’s dominance, which leads to lower sustainability disclosure. Our finding is somewhat contradictory to some previous studies, which report that government’s influence has a positive relationship with non-financial disclosure in China [23] and Malaysia [44]. However, this study confirms that stakeholder and institutional theories can be plausible explanations for the sustainability disclosure motivations of a firm in emerging economies. The government has recently begun paying attention to sustainability issues in Vietnam, and thus, its pressure on companies is relatively less stringent. Under such circumstances, in which the government is the most powerful stakeholder but less coercive on sustainability, companies do not necessarily participate in voluntary sustainability reporting [15,31,34].

We provide evidence that ownership concentration tends to lower non-financial information disclosure, which is in line with good corporate governance and agency perspectives [10]. Major shareholders likely use their controlling power for their own interest, which hampers the disclosure of a wider range of corporate information that might affect firm value. Dispersed ownership, in contrast, might facilitate voluntary information disclosure. This phenomenon has been frequently observed in corporate governance systems in emerging economies in which family dominance, owner-mangers, and concentrated ownership are more common [15,39]. It is noteworthy that the influence of the largest shareholder on information disclosure varies depending on who the largest shareholder is. Individual largest shareholder has a positive effect while government largest shareholder has a negative effect on sustainability disclosure; institutional largest shareholder has no relationship with sustainability disclosure. This result might imply that firms in emerging economies such as Vietnam likely report more sustainability information when more diverse shareholders are engaged.

This study presents several critical determinants for voluntary sustainability disclosure that are very much consistent with previous studies. The positive effects of profitability and firm value in the capital market on voluntary information disclosure can be explained with agency theory, which indicates that managers with high performance and valuable organizational resources wish to send good news (signals) to principals (i.e., shareholders) [49,57]. Firm size is found to facilitate sustainability information disclosure, which shows that larger firms are more exposed to scrutiny of stakeholders, and thus, are more pressured to report non-financial information to gain and maintain legitimacy [31,58]. Moreover, we confirm the negative relationship between leverage and sustainability disclosure, as expected.

This study provides some significant implications for managers and public policymakers who attempt to encourage firms to adopt sustainability activities and disclose non-financial information in emerging economies. First, the results of the study indicate that being the most powerful stakeholder, the government can play a critical role in proliferating sustainability in Vietnam. The national strategy for green growth, which was launched in 2012, and other related initiatives, such as the guidelines for social information disclosure in the capital market, should be reinforced and executed in reality. Then, Vietnamese firms can swiftly adopt and implement sustainability in their business strategy and management activities since they are greatly influenced by the government. Second, privatization can help sustainability information disclosure. The Vietnamese government is increasingly opening its economy to foreign investors by lifting foreign ownership limits on listed companies; however, a large portion of listed companies’ shares are still under government holdings. If the government pushes companies to be exposed to general shareholders, particularly foreign investors, by reducing its holdings, the Vietnamese firms would likely take sustainability activities and disclosure more seriously. Third, from a managerial standpoint, it allows executives in Vietnam to better comprehend which stakeholders demand companies to disclose sustainability information with what rationales. For instance, we show that profitable, highly valued in the capital market, and bigger firms that may have information asymmetries likely have a greater demand from information-seeking groups.
(e.g., extant and potential investors). Consequently, managers should assess their salient stakeholders and determine if and when communication should take place with such stakeholders by reporting relevant non-financial information.

6.2. Limitations and Future Research Directions

By clarifying some limitations, this study suggests directions for future research. First, this study provides evidence about the negative effect of government ownership on voluntary information disclosure, which is not consistent with the findings of previous studies. This inconclusive result might be engendered by the contextual difference of the Vietnamese economy. To generalize the results of our study, future research should re-examine the role of the government in non-financial information reporting in other country settings. Second, this study focuses only on disclosure in a separated form of sustainability report or sustainability information integrated in annual reports. Companies can communicate with stakeholders about their sustainability activities using other forms of reporting. Future research should consider a wider range of disclosure in other media such as newspapers, the Internet, and so on. Third, although this study controls for potential confounding variables in the model, other variables may also affect sustainability information disclosure in emerging economies. Future work could examine other contributing factors (e.g., management commitment, organizational capabilities, and international buyers).

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