

## Corporate Governance Code Revisions, Corporate Social Performance and Firm Value: International Evidence

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**Abstract:** This study investigates the impact of corporate governance code revisions on corporate social performance, and its' moderating effect on the relationship between corporate social performance and firm value. This study applies the two-stage Heckman sample selection bias approach to tackle endogeneity issues. The sample includes public listed firms from 35 countries that have released their national codes of corporate governance from 2007-2014. Prior to the analysis, we read through the national codes of corporate governance, and find that a majority of the recently revised codes provide new recommendations related to corporate social responsibility. Based on the regression results, we find that progressive corporate governance code revisions are positively related to corporate social performance. In addition, the progressive revisions positively moderate the relationship between corporate social performance and firm value, which is shown in those firms having above-median positive correlation between their corporate governance score and the code revisions. The overall results are robust to industry-adjusted measure of corporate social performance. Furthermore, we find that firm age is important in explaining the moderating effect of corporate governance code revisions.

Keywords: Corporate governance, code, corporate social responsibility, revision, firm value, Heckman

JEL classification: G23, G28, G3, I38

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## 1. Introduction

Corporate social responsibility (CSR) is a voluntary code of best practices in most legal systems (Wymersch, 2006). The increased attention on CSR is driven by the increased organisational legitimacy which can be explained by institutional context and theory (Aguilera et al., 2007). Institutional pressure of one country determines the efficiency of CSR diffusing into the corporations (Aguilera & Cuervo-Cazurra, 2004; Zattoni & Cuomo, 2008), although firm characteristics also matter (Ntim & Soobaroyen, 2013). Over the years, corporate governance principles have been gradually shifting towards the stakeholder-based governance model (Elkington, 2006) in parallel with the concept of sustainability. Ntim and Soobaroyen (2013) gave an explicit agenda of jointly pursuing corporate governance and CSR.

The codes of corporate governance play a pivotal role in driving corporate governance reforms. Through corporate governance code revisions, the best corporate governance recommendations are revised and updated according to market expectations. Each national code of corporate governance designs its recommendations fitted to the local organisational norms. Extending the research idea of Fauver et al. (2017) that looked at institutional board reforms, this study investigates how the progressive development of each national code of corporate governance affects corporate social performance. Also, because Ntim and Soobaroyen (2013) has proven that a sound (internal) corporate governance is significantly related to the relationship between CSR and corporate financial performance, we further explore the exogenous force exerted by corporate governance code revisions in affecting the relationship between CSR and firm value.

Based on the empirical data from thirty-five economies that have released their national codes of corporate governance, we find that progressive corporate governance code revisions significantly improve corporate social performance. The result is consistent with our reading over the revised codes of corporate governance which reveals some new recommendations in a majority of the revised codes containing CSR elements. We conjecture that corporate governance code revisions can lead to higher coercive pressure of CSR through legitimacy. Although this is partially correct because CSR can also be driven by mimetic and normative pressure, we add that the corporate governance code revisions can become an effective catalyst of improving corporate social performance.

Next, we separate the total sample into two groups: (1) one group that has higher than the median of the coefficient of correlation between firms' corporate governance score and the corporate governance code revisions; (2) another group that has lower than the median value. We show that the first group of subsample shows improvement of the economic value of increasing corporate social performance as a reward to shareholders. This allows us to remove the possibility of symbolical compliance with the CSR recommendations throughout the code revisions because the firm value is significantly improved from higher corporate social performance. The finding suggests that firms do not tend to develop CSR policies only for satisfying stakeholders' expectation without substantively executing CSR. Yet, Kamal (2021) provided evidence that stakeholders are not satisfied with the disclosures of governance information as there is a significant gap between stakeholder expectations and corporate disclosures.

With that, we conduct a sensitivity test and reveals that the positive moderating effect of corporate governance code revisions is shown in the low-age firms only. This is probably because low-age firms greatly desire to seize market attention over their substantive compliance with legitimacy. Instead, high-age firms may be reluctant to restructure its corporate governance according to the new recommendations that emphasised stakeholder-based governance. Then, we readjust the corporate social performance measure with the industry-specific mean, and still obtain similar findings that progressive corporate governance code revisions improve corporate social performance, and positively moderates corporate social performance and firm value particularly for firms closely following the best practices of corporate governance.

This paper is organised as follows. After the introduction, section two discusses the institutional theory, while section three reviews the past literature and hypothesis development. Section four reveals the methodology, and section five presents the results and discussion. Lastly, section six is the conclusion.

## 2. Institutional Theory

The research framework of this study relies on institutional theory which emphasises the role of institutions over the organisations' economic activities (North, 1990). Institutions are characterised as the stable, valued and recurring patterns of behaviour (Huntington, 1969), and as the collections of rules and routines that define actions in terms of relations between roles and situations (March & Olsen, 1989). Other than the formal organisation of government and corporations, institutions also can be the norms, incentives and rules (Matten & Moon, 2008). In other words, institutions create legitimacy.

Institutional theory suggests that the dynamism of the corporate environment is influenced by cultural norms, values and rituals. The central tenet of the institutional theory lies in the organisational legitimacy which is influenced by the role of the state, professional bodies and public opinion in shaping organisational structures, policies and the way firms respond to the society (Scott, 1995). Usually, legitimacy is related to persistence, credibility and validity (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Legitimacy is captured in different measures of acceptance, reasonableness, appropriateness and congruence (Deephouse & Carter, 2005). Firms are willing to comply with institutions to gain external support for future development (Orr & Scott, 2008). Empirical evidence from Beiner et al. (2006), Drobetz et al. (2004), Goncharov et al. (2006), Henry (2010), and Munisi and Randøy (2013) support institutional theory of firm compliance over the codes of corporate governance.

An organisational legitimacy can be formed through coercive isomorphism, mimetic processes and normative pressures (DiMaggio & Powell, 1983). Coercive isomorphism reveals codified rules, norms, or laws assigning legitimacy to new management practices. Self-regulatory and voluntary initiatives including developing codes of conduct by bodies such as the Organisation for Economic Co-operation and Development, the International Labour Organization and the Global Reporting Initiative are considered as the isomorphisms (see Matten & Moon, 2008). Mimetic processes refer to the intention of the managers to follow legitimacy, because legitimacy is seen as the common agreed

practices that can benefit the organisations especially when a business faces increased uncertainty and complex environment. Normative pressures refer to the third source of isomorphic pressure which sets the standards for organisational legitimacy through educational and professional authorities.

Corporate governance code revisions that are usually released by government authorised independent bodies or stock exchanges can exert regulative pressures to the firms, which can be considered as a kind of coercive isomorphism in corporate governance reforms. The code revisions seize the attention of many investors to look into the firms' corporate governance practices, which indirectly bring informal pressures to the firms. Goncharov et al. (2006) revealed the shareholding pressure over the firms' degree of compliance with the corporate governance best practices. Even, regulative pressure brings the firms to join in collusion (DiMaggio & Powell, 1983). This is confirmed by Aggarwal and Jha (2019) who provided empirical evidence of the impact of regulative pressure on CSR engagement, besides the significant impacts of normative and cognitive pressures.

Szabó and Sørensen (2013) documented that corporate governance is expected to continue with the inclusion of more CSR related elements in the corporate governance framework. This is consistent with current market expectation requiring firms to consider corporate sustainability in decision making. With that, corporate governance code revisions play the role of creating legitimacy to promote the balance of interest between shareholders and stakeholders.

### **3. Literature Review and Hypothesis Development**

#### *3.1 The Relationship between Corporate Governance and CSR*

CSR is morally mandatory rather than legally mandatory. CSR aims to protect the welfare of the stakeholders rather than merely prioritising shareholders' value (Lantos, 2001). Because CSR is not mandated by laws, corporate governance is expected to be the internal driving force of CSR in the organisations. Hence, a sound corporate governance must ensure shareholders' value is maximised as well as ensure that the welfare of stakeholders is protected (Barney, 2007; Hancock, 2005). Dunlop (1998) suggested that corporate governance must ensure firm accountability on the stakeholders. Such accountability is crucial for seizing trust from investors and other stakeholders (Page, 2005). Therefore, the relationship between corporate governance and CSR is viewed as the interaction between a business' internal and external socio-political environment (Windsor & Preston, 1988) that aim to establish sustainable growth (Van den Bergh & Louche, 2005).

A sound corporate governance structure minimises the cost of agency and increases firm performance (Gompers et al., 2003; Ho, 2005). The decisions of CSR under corporate governance should bring long term economic value to the firms while gaining trustworthiness from the key stakeholders (Aguilera et al., 2007). This can be achieved through reduced transaction costs and increased investors' favour through a good CSR policy (Hancock, 2005). For example, Iadtridis (2015) showed that corporate governance is one of the factors that is significantly influencing corporate giving, by reinforcing

the disclosure requirements related to fundraising and giving. This is consistent with Bhimani and Soonawalla's (2005) continuum model that integrated CSR and corporate governance in a framework. A recent study by Lu and Wang (2021) showed that corporate governance best practices including CEO non-duality, establishment of environmental, social and governance (ESG) committees and board gender diversity are positively related to corporate environmental performance as well as the CSR disclosure.

### 3.2 Corporate Governance Code Revisions and CSR

Over the last decades, many national codes of corporate governance have emerged. The studies on the codes of corporate governance emerged since Gregory (2001, 2002), include Aguilera and Cuervo-Cazurra (2004, 2009), Aguilera and Jackson (2003), Bhatt and Bhatt (2017), Ooi et al. (2021). The codes of corporate governance are usually designed by a collective body for giving the best corporate governance recommendations that suit a majority of firms in a country. The code usually contains a voluntary set of principles, recommendations, standards and the best practices of governance (Chizema, 2008). Many national codes of corporate governance do not require mandatory compliance, because the codes complement the deficiencies of the rigid corporate governance legal laws (Aguilera & Cuervo-Cazurra, 2004), however, comply-or-explain principles are implemented in many codes of corporate governance.

Many national codes of corporate governance contain CSR-related recommendations as part of the governance. For example, the *Turnbull Report*, published in the UK in 1999, documents that risk assessment should cover not only narrow financial risk, but also risks related to health, safety, the environment, reputation and business probity issues (Turnbull, 1999). The *King Report on Corporate Governance for South Africa – 2002 (King II Report)* (Institute of Directors in South Africa, 2002) introduced the Triple Bottom Line concept, which requires companies to report on social transformation, ethics, the environment and socially responsible investment. Also, the *Code of Best Practice on Corporate Governance 2013* published by the Securities and Exchange Commission of Sri Lanka emphasises eight principles of sustainability reporting, including the environment, society, labour practice, product responsibility, sustainable disclosure, stakeholder identification, engagement and effective communication, and economic sustainability (Securities and Exchange Commission of Sri Lanka, 2013).

Over the years, the code issuers have paid increasing attention on CSR throughout corporate governance code revisions. For example, in Australia, an earlier code released in 2003 namely the *Principles of Good Corporate Governance and Best Practice Recommendations* that is published by the Australian Securities Exchange highlights that directors and officers should be responsible for corporate behaviour deviating from the provisions of social responsibility related to consumer protection, privacy disclosure, trade practices and fair dealing laws, compliance with employment law, health and safety in occupation, fair opportunity of employment, superannuation, and environmental and pollution controls (ASX Corporate Governance Council, 2003). Later, the corporate governance code revision in 2007 provides new recommendations that encourage the firms to specifically disclose CSR approaches to the community

such as donations or sponsorship policies, environmental policies, and community engagement activities. Besides, in Belgium, the earlier national codes of corporate governance namely the *Corporate Governance – Recommendations* (Federation of Belgian Enterprises, 1998) and *Belgian Corporate Governance Code* (Belgian Corporate Governance Committee, 2004) released in 1998 and 2004 do not emphasise on CSR. Only the most recently revised version released in 2009, namely *The 2009 Belgian Code on Corporate Governance* (Belgian Corporate Governance Committee, 2009) has emphasised on CSR by requiring the board of directors to translate value and strategies into policies that comply with the CSR principle.

In the context of Malaysia, only the *Malaysian Code on Corporate Governance 2012* (MCCG 2012) started to provide recommendations on CSR by encouraging the board of directors to formulate corporate strategies on ESG (Securities Commission Malaysia, 2012). Also, the MCCG 2012 encourages the board of directors to disclose CSR policies and implementation in the annual report and on the corporate website. In the context of Indonesia, the earlier code of corporate governance namely the *Code for Good Corporate Governance* (Indonesian National Committee on Corporate Governance, 2000) released in 2000 merely provides a brief recommendation on CSR, while the code revision in 2001 emphasises on maintaining good relationship with various stakeholders and implementing environmental protection strategies. The most recent revision in 2006 provides a clearer picture by recommending the firms' board of directors to oversee CSR, such as ensuring the fulfilment of CSR and ensuring a clear and focused written plan on CSR policy development. More evidence regarding CSR recommendations emphasised throughout corporate governance code revisions are not reported here due to length limits. Therefore, we hypothesise that corporate governance code revisions can lead to better corporate social performance.

*Hypothesis 1:* Corporate governance code revisions significantly lead to increasing corporate social performance.

While CSR has been proven to be related to firm performance (Haque & Ntim, 2017), another strand of study shows the moderating role of corporate governance in the relationship between CSR and firm performance. For example, Welford (2007) demonstrated that an effective corporate governance serves as an important foundation in ensuring effective corporate social performance. The rationale is that a sound corporate governance reduces the managerial incentive of misusing CSR for self-interest (Berrone & Gomez-Mejia, 2009). Instead, in weak governance firms, managers tend to devote firm resources for self-interest via CSR investing (Brammer & Millington, 2008), or they tend to strategically choose CSR activities that can generate support from social and environmental activists in order to safeguard their job position (Cespa & Cestone, 2007). Hence, the conflict of interest between shareholders and management can be extended by CSR engagement (Brown & Caylor, 2006). In sum, managers pursue their own interests in CSR through discretionary giving at the expense of shareholder value (Barnett, 2007; Haley, 1991; Wang et al., 2008). Ideally, an effective corporate governance can increase the economic value of CSR. One strand of study including Beiner et al. (2006), Drobetz et al. (2004), Goncharov et al. (2006) and Henry (2010) show that the relationship between degree of corporate governance code compliance

and firm value is positive. Another strand of study, for example, Ntim and Soobaroyen (2013), show that corporate governance is able to improve the relationship between corporate social performance and financial performance.

Through corporate governance code revisions, if the firms substantively comply with the best recommended governance practices, the managers should have less opportunity in pursuing self-interest from CSR engagement. The explicit corporate governance institutional frameworks jointly integrating CSR and corporate governance as proposed by Ntim and Soobaroyen (2013) raises the issue on economic value enhancement given the aim of corporate governance is to maximise the shareholders' value. Therefore, we hypothesise that corporate governance code revisions that bring improvement to the firms' standard of governance should positively moderate the relationship between corporate social performance and firm value.

*Hypothesis 2:* Corporate governance code revisions positively moderate the relationship between corporate social performance and firm value.

## 4. Methodology

This section describes the variable development of the codes of corporate governance, and the collection of other financial data. Then, this section presents construction of the regression models and the method of analysis.

### 4.1 Codes of Corporate Governance

Following Aguilera and Cuervo-Cazurra (2009), this study only chooses the national codes of corporate governance that are not enforced by laws but because it is the majority. The selected codes can be either issued by governments, the stock exchange, employer association, and director association as part of a national commission to improve corporate governance. We download the codes of corporate governance from the European Corporate Governance Institute (ECGI) website. This study excludes the codes of corporate governance being developed to target private groups, such as codes for insurance companies, institutional investors, pension funds, etc. Also, drafts of codes of corporate governance before being officially published are not considered.

This study investigates public listed firms across thirty-five economies including Australia, Austria, Belgium, Brazil, Canada, China, Denmark, Egypt, Finland, France, Germany, Hong Kong, Hungary, India, Indonesia, Israel, Italy, Japan, Korea, Malaysia, Netherlands, Norway, New Zealand, Philippines, Poland, Portugal, Russia, Singapore, South Africa, Sweden, Switzerland, Taiwan, Thailand, Turkey, and the United Kingdom. These economies are selected because they have released the national codes of corporate governance and the information of the corporate governance code revisions are available in the European Corporate Governance Institute (ECGI) website.

Firm-level corporate governance data are downloaded from the ASSET4 ESG database that is powered by Thomson Reuters. However, because ASSET4 ESG does not fully cover the public listed firms of each market, hence, our sample contains only the firms that show available data in the database. Also, we exclude the sample from the US because the majority of US codes of corporate governance are mandated by laws,

and it is different with the other countries' national codes of corporate governance that usually allow voluntarily compliance. With that, the total number of firm-year observations of this study is 20,867. However, due to missing data for certain variables, we run the balance panel regression with only 11,192 total number of firm-year observations.

Also, this study extracts firm-level corporate social performance from the ASSET4 ESG database. The definition of corporate social performance is according to ASSET4 ESG. The other firm fundamental data including total assets, total debts, total sales and market-to-book value are downloaded from Datastream, a division of the Thomson Reuter database. All data covers from 2007 to 2014. The time span of the sample period is sufficient to account for more than one round of corporate governance code revision in the majority of the selected countries of this study because usually the revision is run in every four years.

Preliminary screening over the information of corporate governance code revisions reveals that there is one country in our sample having performed six rounds of corporate governance code revisions in the sample period. Because the sixth revision happens at the end of the sample period, we believe the effect on firms is less significant and not shown immediately. Also, because only a small number of firm-year observations are associated with the sixth corporate governance code revision over the total observations, therefore, we decide to exclude the sixth revision in our analysis. Thus, to capture the effect of progressive corporate governance code revisions, we construct five dummy variables which are *CodeRev1<sub>it</sub>*, *CodeRev2<sub>it</sub>*, *CodeRev3<sub>it</sub>*, *CodeRev4<sub>it</sub>*, and *CodeRev5<sub>it</sub>*.

According to the CSR literature, for example, Carroll (1979) decomposes CSR into four categories: economic (jobs, wages, services), legal (legal compliance), ethical (moral, right and fairness) and discretionary (philanthropic giving). Another example is shown in Lantos (2001), where CSR is decomposed into three categories: ethical (moral related decisions), altruistic (humanitarian/philanthropic), and strategic (strategic philanthropy to achieve business goals while protecting the welfare of society (see Jamali et al., 2008)). In this study, we download the corporate social performance score from ASSET4 ESG which covers seven categories of CSR policies that include employment quality, health and safety, training and development, diversity, human rights, community, and product responsibility.<sup>1</sup> All of these components used to construct corporate social performance have encompassed the aspects of CSR as suggested by Carroll (1979) and Lantos (2001).

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<sup>1</sup> Employment quality policy includes employment satisfaction, salaries, salaries distribution, bonus plan for employees, generous fringe benefits, employment awards, trade union representation, employees leaving, turnover of employees; healthy and safety policy includes controlling injury rate, lost time industry rate, lost days, HIV-AIDS programme; training and development includes average training hours per employee, training cost, internal promotion, management training; diversity policy includes women employees, women managers, positive discrimination, flexible working hours, and day care services; human rights includes human rights contractor, human rights breaches contractor; community policy includes donations, cash donations, in-kind donations, crisis management systems; product responsibility policy includes customer satisfaction, product access low price, and healthy food or products.



#### 4.2 Model Construction

To examine hypothesis 1 of this study, we construct equation 1 for analysis. Equation 1 examines the effect of corporate governance code revisions on corporate social performance (*SocialPerformance<sub>it</sub>*). The dependent variable, i.e., *SocialPerformance<sub>it</sub>*, indicates firm *i*'s capacity to generate trust and loyalty with its workforce, customers and society through using the best management practices to increase the company's reputation and the health of its licence to operate at year *t*. *Xs<sub>it</sub>* are independent variables controlling the effects of other firm fundamental variables.

$$SocialPerformance_{it} = \alpha_{it} + Xs_{it} + R_{it} + C_{it} + \varepsilon_{it} \quad (1)$$

*Xs<sub>it</sub>* are the control variables. First, we control firm size (*FirmSize<sub>it</sub>*) that is measured by the natural logarithm of total assets of firm *i* at year *t*. Larger size firms can attract more attention and pressure in responding to stakeholders' demands (Burke et al., 1986). Hence, we expect firm size to be positively related to *SocialPerformance<sub>it</sub>*. Second, we incorporate leverage (*Leverage<sub>it</sub>*) that is measured by total debt divided by total assets. According to Lamia et al. (2014), leverage has a significant positive impact on CSR disclosure. Hence, we expect the same for *Leverage<sub>it</sub>* giving its positive relationship with *SocialPerformance<sub>it</sub>*. Third, we control return on equity (*ROE<sub>it</sub>*) that represents profitability, measured by net income minus preferred dividend divided by total equity of firm *i* at year *t*. As higher profitability increases the firm's ability to engage more in social responsibility (see Kamil & Herusetya, 2012), we expect *ROE<sub>it</sub>* to be positively related to *SocialPerformance<sub>it</sub>*. Fourth, we control for Tobin's Q (*TobinQ<sub>it</sub>*) representing firm value that is measured by total equity market value plus total liabilities market value divided by total equity book value plus total liabilities book value. Fifth, we control corporate governance of firm *i* at year *t* by using *CGScore<sub>it</sub>* that is downloaded from ASSE4 ESG, and we expect good corporate governance leads to more CSR in order to create sustainable corporate growth. The control variables are also used by Cornett et al. (2016) and Kansal et al. (2014) in explaining CSR performance.

*R<sub>it</sub>* represents the variable of corporate governance code revisions. We capture the revisions in two ways. First, we capture the cumulative number of corporate governance code revisions in *CumulativeRevision<sub>it</sub>*. Second, we capture the progressive corporate governance code revisions happening within the sample period in the dummy variables (*CodeRev1<sub>it</sub> – CodeRev5<sub>it</sub>*). With that, we first replace *R<sub>it</sub>* with *CumulativeRevision<sub>it</sub>* which is counted by the cumulative number of revised codes of corporate governance that are released at year *t*, we expect the estimate of *CumulativeRevision<sub>it</sub>* to be significantly positive. Then, we replace *CumulativeRevision<sub>it</sub>* with the dummy variables capturing the progressive code revisions. With that, *CodeRev1<sub>it</sub>* is a dummy variable representing the corporate governance code revision happening in the earliest of the sample period in year *t*; each firm *i* in the country that experiences the code revision is assigned a value of one from *t* until the year before the next revision. *CodeRev2<sub>it</sub>* is the dummy variable representing the second corporate governance code revision happening in the sample period after *CodeRev1<sub>it</sub>*. The following dummy variables namely *CodeRev3<sub>it</sub>*, *CodeRev4<sub>it</sub>*, and *CodeRev5<sub>it</sub>* represent the third, fourth and fifth corporate governance code revisions happening in the sample period. *C<sub>it</sub>* contains the country dummies, industry dummies and year dummies complying with the dummy variable trap.

To examine hypothesis 2 of this study, we construct equations 2a and 2b using subsamples of  $Corr^{CodeRev-CG} = 1$  and  $Corr^{CodeRev-CG} = 0$  respectively. The dependent variable is Tobin's Q ( $TobinQ_{it}$ ) representing firm value.  $X'_{it}$  are the control variables that include  $FirmSize_{it}$ ,  $Leverage_{it}$ ,  $MTBV_{it}$ ,  $ROE_{it}$ ,  $CGScore_{it}$  and  $SocialPerformance_{it}$ . We expect larger firms, higher leverage, better growth opportunity, higher profitability, better corporate governance and more CSR can improve the firms' competitiveness, and hence are positively related to  $TobinQ_{it}$ .  $R_{it}$  is replaced by either  $CumulativeRevision_{it}$  or  $CodeRev_{it} - CodeRev6_{it}$ .  $SocialPerformance_{it}$  is the independent variable, and it is interacted with  $R_{it}$ . We expect the estimate of the interaction term to show higher positive value in equation 2a than in equation 2b.

$$[TobinQ_{it} \mid Corr^{CodeRev-CG} = 1] = \alpha_{it} + X'_{it} + R_{it} + R_{it} \times SocialPerformance_{it} + C_{it} + \epsilon_{it} \quad (2a)$$

$$[TobinQ_{it} \mid Corr^{CodeRev-CG} = 0] = \alpha_{it} + X'_{it} + R_{it} + R_{it} \times SocialPerformance_{it} + C_{it} + \epsilon_{it} \quad (2b)$$

We extract the coefficients of correlation between  $CGScore_{it}$  and  $CumulativeRevision_{it}$ , as shown in equation 3.

$$Corr^{CodeRev-CG}_{it} = \frac{Cov(CGScore - CumulativeRevision)_{it}}{StdevCGScore_{it} StdevCumulativeRevision_{it}} \quad (3)$$

where

$$\begin{aligned} &COV(CGScore, CumulativeRevision) \\ &= \frac{(CGScore - \overline{CGScore}) \cdot (CumulativeRevision - \overline{CumulativeRevision})}{n - 1} \end{aligned} \quad (4)$$

where  $Corr^{CodeRev-CG}$  is the correlation between the  $CGScore_{it}$  and  $CumulativeRevision_{jt}$  of firm  $i$ ;  $COV(CGScore - CumulativeRevision)_{it}$  is the covariance between  $CGScore_{it}$  and  $CumulativeRevision_{jt}$ ;  $StdevCGScore$  and  $StdevCumulativeRevision$  are the country-adjusted standard deviations of firm  $i$  and  $CumulativeRevision_{it}$ ;  $n$  is the number of firms in the total sample;  $\overline{CGScore}_{it}$  is the industry and country adjusted mean of  $CGScore_{it}$  in industry  $d$  of country  $j$  in year  $t$ , and  $\overline{CumulativeRevision}_{it}$  is the mean of  $CumulativeRevision_{jt}$  of country  $j$ .

#### 4.3 Alternative Method of Analysis: Heckman Sample Selection Bias Approach

We are concerned that our empirical framework may contain potential endogeneity issues regarding corporate social performance. This is because corporate social performance can also be determined by firm fundamental variables such as firm size, Tobin's Q, corporate governance, etc. For example, large firms possess more established facilities and resources available for CSR activities. Also, firms with high Tobin's Q have higher incentive to engage in CSR so that they can gain more social support for future development. Even, a sound corporate governance may likely promote more CSR disclosure. Because our sample relies on data availability of the ASSET4 ESG, our results may be likely subjected to sample selection bias.

Therefore, we apply the two-stage Heckman sample selection bias model. The first stage is to run the probit regression, and the second stage is to run pooled OLS based on equations 1, 2a and 2b. For equation 1, we first run the probit regression. The dependent variable is a dummy variable equals to 1 if *SocialPerformance<sub>it</sub>* is above the industry-adjusted median of the country at year *t* of firm *i*. The independent variables of the probit regression are the firm fundamental variables (*TobinQ<sub>it</sub>*, *FirmSize<sub>it</sub>*, *ROE<sub>it</sub>* and *CGScore<sub>it</sub>*) and the corporate governance variables include board size, board duality, ratio of independent directors, and a dummy variable that equals to 1 if the chairman is the ex-chief executive director. Country dummies, industry dummies and year dummies are also controlled in the probit regression. An inverse Mill's ratio (*InverseMills<sub>it</sub>*) is computed from the probit regression using the residuals, which is then incorporated in the second stage of pooled OLS.

## 5. Results and Discussion

This section first provides the descriptive statistics of all variables used for analysis. Then, the results of correlations are reported, followed by the main regression results and then the robustness tests' results.

### 5.1 Descriptive Statistics

Table 1 shows the descriptive statistics of the variables used in this study. The mean and median of *TobinQ<sub>it</sub>* are 1.61 and 1.23 respectively, with the standard deviation being 1.13. These indicate that a majority of the sample firms have positive firm value. The mean and median of *FirmSize<sub>it</sub>* are 17.29 and 17.04 respectively. The mean and median of *Leverage<sub>it</sub>* are 0.16 and 0.14. These indicate that a majority of the sample have low capital structure. The mean and median of *ROE<sub>it</sub>* are 0.13 and 0.12, with the standard deviation of 0.20. Besides, the mean and median of the *CGScore<sub>it</sub>*

**Table 1.** Descriptive statistics

	Observations	Mean	Std Dev.	Percentile		
				25th	50th	75th
<i>TobinQ<sub>it</sub></i>	11192	1.61	1.13	1.01	1.23	1.77
<i>FirmSize<sub>it</sub></i>	11192	17.29	2.97	15.04	17.04	19.50
<i>Leverage<sub>it</sub></i>	11192	0.16	0.16	0.03	0.14	0.26
<i>ROE<sub>it</sub></i>	11192	0.13	0.20	0.05	0.12	0.20
<i>CGScore<sub>it</sub></i>	11192	0.43	0.30	0.14	0.43	0.73
<i>SocialPerformance<sub>it</sub></i>	11192	0.52	0.31	0.20	0.53	0.84
<i>CumulativeRevision<sub>it</sub></i>	11192	3.80	2.02	2.00	3.00	5.00
<i>CodeRev1<sub>it</sub></i>	11192	0.59	0.49	0.00	1.00	1.00
<i>CodeRev2<sub>it</sub></i>	11192	0.23	0.42	0.00	0.00	0.00
<i>CodeRev3<sub>it</sub></i>	11192	0.06	0.24	0.00	0.00	0.00
<i>CodeRev4<sub>it</sub></i>	11192	0.03	0.17	0.00	0.00	0.00
<i>CodeRev5<sub>it</sub></i>	11192	0.01	0.12	0.00	0.00	0.00

are both 0.43, indicating that the sample firms' corporate governance have much room for improvement. However, the sample also contains a small portion of firms with extremely low and high corporate governance scores. The mean and median of *SocialPerformance<sub>it</sub>* are 0.52 and 0.53 respectively.

Even though the minimum value of the cumulative number of corporate governance code revisions is zero, this shows that some countries only begin to release their first codes of corporate governance in the middle of the sample period. *CodeRev1* has the largest mean value, followed by *CodeRev2* and so forth. This indicates that all the countries in the sample have at least experienced one corporate governance code revision within the sample period, while some countries have introduced two, three, four, or five corporate governance code revisions between the sample period.

Table 2 shows the correlations among the variables used in this study. There are no high correlations among the coefficients of correlation between the independent variables. The multicollinearity test shows low variance inflation factors (VIFs) among the independent variables (less than 5.00). In Table 2, this study observes that the cumulative number of corporate governance code revisions is positively correlated with the corporate social performance, and *CodeRev1* and *CodeRev2* are positively correlated with the corporate social performance. All of the coefficients of correlations are statistically significant at the 1 per cent level.

## 5.2 Regression Results of the Effect of Corporate Governance Code Revisions on Corporate Social Responsibility

To examine hypothesis 1 of this study, Table 3 highlights the relationship between corporate governance code revisions and corporate social performance. Firm size (*FirmSize<sub>it</sub>*) is positively related to corporate social performance, and the effect is statistically significant at the 1 per cent level (coeff = 0.0206, p-value = 0.0020). The effect of leverage (*Leverage<sub>it</sub>*) is significantly negative at the 1 per cent level (coeff = -0.0827, p-value = 0.0002). The effect of return on equity (*ROE<sub>it</sub>*) is significantly positive at the 5 per cent level (coeff = 0.0348, p-value = 0.0133). Tobin's Q (*TobinQ<sub>it</sub>*) do not show any significant relationship with corporate social performance, indicating that market-based performance does not significantly determine corporate social performance compared to accounting-based performance. Corporate governance score (*CGScore<sub>it</sub>*) is positively related to corporate social performance at the 1 per cent level of significance (coeff = 0.3491, p-value = 0.0000).

The estimate of cumulative corporate governance code revision is positive although the effect is not statistically significant. The dummy variables representing progressive corporate governance code revisions show significant positive relationship with corporate social performance, and the coefficients increase from *CodeRev1* to *CodeRev4*. Only the effect of *CodeRev5* is not statistically significant, which may be due to the small portion of sample involved in recent corporate governance code revision. The results indicate that progressive corporate governance code revisions significantly lead to the increase of corporate social performance. However, this study doubts that the increasing corporate social performance following the progressive corporate governance code revisions may be influenced by increasing global organisational legitimacy on

**Table 2.** Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	VIF
1 <i>TobinQ<sub>it</sub></i>	1.0000												1.31
2 <i>FirmSize<sub>it</sub></i>	-0.2438	1.0000											1.73
3 <i>Leverage<sub>it</sub></i>	-0.1690	-0.0738	1.0000										1.03
5 <i>ROE<sub>it</sub></i>	0.4186	-0.0886	-0.0515	1.0000									1.29
6 <i>CGScore<sub>it</sub></i>	0.0410	-0.4799	0.1294	0.0615	1.0000								1.85
7 <i>SocialPerformance<sub>it</sub></i>	-0.0429	0.1277	0.0466	0.0559	0.3874	1.0000							1.52
8 <i>CumulativeRevision<sub>it</sub></i>	-0.0033	-0.2763	0.0546	0.0159	0.2610	0.2577	1.0000						2.95
9 <i>CodeRev1<sub>it</sub></i>	-0.0146	0.1749	0.0085	0.0045	-0.1676	-0.0633	-0.4543	1.0000					4.60
10 <i>CodeRev2<sub>it</sub></i>	0.0029	-0.1171	0.0032	-0.0036	0.1234	-0.0447	-0.0005	-0.6404	1.0000				4.05
11 <i>CodeRev3<sub>it</sub></i>	0.0090	-0.1842	0.0137	0.0068	0.1880	0.1010	0.4233	-0.3203	-0.1478	1.0000			2.88
12 <i>CodeRev4<sub>it</sub></i>	0.0212	-0.1320	0.0196	0.0068	0.1465	0.1185	0.4641	-0.2457	-0.1134	-0.0567	1.0000		2.51
13 <i>CodeRev5<sub>it</sub></i>	0.0086	-0.0532	0.0091	-0.0179	0.0060	0.0754	0.4031	-0.1670	-0.0771	-0.0386	-0.0296	1.0000	1.91

Note: VIF is the variance inflation factor resulting from multicollinearity tests. The value of VIF lower than 5.00 indicates no multicollinearity issue in the regression model.

**Table 3.** Regression results of the relationship between corporate governance code revision and corporate social performance

<i>FirmSize<sub>it</sub></i>	0.0206*** (0.0020)	0.0207*** (0.0019)
<i>Leverage<sub>it</sub></i>	-0.0827*** (0.0002)	-0.0828*** (0.0002)
<i>ROE<sub>it</sub></i>	0.0348** (0.0133)	0.0343** (0.0145)
<i>TobinQ<sub>it</sub></i>	-0.0034 (0.3435)	-0.0031 (0.3857)
<i>CGScore<sub>it</sub></i>	0.3491*** (0.0000)	0.3449*** (0.0000)
<i>CumulativeRevision<sub>it</sub></i>	0.0049 (0.3013)	
<i>CodeRev1<sub>it</sub></i>		0.0332** (0.0333)
<i>CodeRev2<sub>it</sub></i>		0.0405** (0.0423)
<i>CodeRev3<sub>it</sub></i>		0.0427* (0.0614)
<i>CodeRev4<sub>it</sub></i>		0.0456* (0.0969)
<i>CodeRev5<sub>it</sub></i>		0.0169 (0.7032)
<i>InverseMills<sub>it</sub></i>	-0.1290*** (0.0000)	-0.1285*** (0.0000)
Constant	0.1044*** (0.4268)	0.0924*** (0.4792)
Country dummy	Yes	Yes
Industry dummy	Yes	Yes
Year dummy	Yes	Yes
Observations	11192	11192

Note: \*\*\*, \*\* and \* represent the level of significance at 1%, 5% and 10%, respectively.

CSR. Unknown of CSR diffuses through coercive isomorphism, mimetic and normative pressures are undetermined at the present, but the results of Table 3 shows that corporate social performance increases following the exogenous legitimacy force.

### 5.3 Regression Results of the Moderating Effect of Corporate Governance Code Revisions on the Relationship between Corporate Social Performance and Firm Value

Table 4 shows that the estimate of *SocialPerformance<sub>it</sub>* is negatively related to firm value, however, it is not statistically significant (coeff = -0.2075, p-value = 0.1037). The result is not new in literature because Cheung et al. (2010), El Ghouli et al. (2011)

and Jiao (2011) obtained similar effects of CSR. Even the impact of CSR is complicated as it can be explained from various aspects such as agency theory (e.g. Li et al., 2016), resource-based view (e.g. Branco & Rodrigues, 2006), stewardship theory (e.g. Balakrishnan et al., 2017), etc. However, the negative estimate of *SocialPerformance<sub>it</sub>* turns into positive when the variable is interacted with *CumulativeRevision<sub>it</sub>* although the effect is not statistically significant (coeff = 0.0508, p-value = 0.1503). When

**Table 4.** Regression results of the moderating effect of corporate governance code revisions on the relationship between corporate social performance and firm value

<i>SocialPerformance<sub>it</sub></i>	-0.2075 (0.1037)	-0.5667** (0.0382)
<i>CumulativeRevision<sub>it</sub></i>	-0.0018 (0.9625)	
<i>CumulativeRevision<sub>it</sub></i> x <i>SocialPerformance<sub>it</sub></i>	0.0508 (0.1503)	
<i>CodeRev1<sub>it</sub></i>		-0.5192** (0.0182)
<i>CodeRev2<sub>it</sub></i>		-0.6709*** (0.0047)
<i>CodeRev3<sub>it</sub></i>		-0.6910** (0.0303)
<i>CodeRev4<sub>it</sub></i>		-0.2197 (0.6112)
<i>CodeRev5<sub>it</sub></i>		0.0594 (0.9148)
<i>CodeRev1<sub>it</sub></i> x <i>SocialPerformance<sub>it</sub></i>		0.4843* (0.0763)
<i>CodeRev2<sub>it</sub></i> x <i>SocialPerformance<sub>it</sub></i>		0.6478** (0.0240)
<i>CodeRev3<sub>it</sub></i> x <i>SocialPerformance<sub>it</sub></i>		0.7995** (0.0348)
<i>CodeRev4<sub>it</sub></i> x <i>SocialPerformance<sub>it</sub></i>		0.2380 (0.6369)
<i>CodeRev5<sub>it</sub></i> x <i>SocialPerformance<sub>it</sub></i>		0.3821 (0.6049)
Inverse Mills	-1.3674*** (0.0000)	-1.3557*** (0.0000)
Constant	8.0411*** (0.0000)	8.4978*** (0.0000)
Control variables	Yes	Yes
Country effect	Yes	Yes
Industry effect	Yes	Yes
Year effect	Yes	Yes
Observations	11192	11192

Note: \*\*\*, \*\* and \* represent the level of significance at 1%, 5% and 10%, respectively.

$SocialPerformance_{it}$  interacts with the corporate governance code revision dummy variables, three out of five estimates display significantly positive values, which are  $CodeRev1_{it} \times SocialPerformance_{it}$ ,  $CodeRev2_{it} \times SocialPerformance_{it}$  and  $CodeRev3_{it} \times SocialPerformance_{it}$ . Non-significant estimates of the other interaction terms  $CodeRev4_{it} \times SocialPerformance_{it}$  and  $CodeRev5_{it} \times SocialPerformance_{it}$  might be because lesser observations comply with the fourth and fifth rounds of code revisions within the sample period. For the three interaction terms that are statistically significant, the magnitude of estimates increases from  $CodeRev1_{it}$  to  $CodeRev3_{it}$  (0.4843 vs 0.6478 vs 0.7995), which indicates that progressive corporate governance code revisions are significantly related to improvement of economic value of CSR as reflected in Tobin's Q.

The overall results of Table 4 suggest that corporate governance code revisions raise the economic impact of corporate social performance. This implies that corporate governance code revisions act as a catalyst of improving the relationship between corporate social performance and firm value. Therefore, hypothesis 2 of this study is accepted.

In general, this study indicates that corporate governance code revisions lead to increasing corporate social performance. Next, this study reveals that the progressive corporate governance code revisions positively moderate the impact of corporate social performance on firm value. In addition, this study shows more detailed evidence that only those firms' corporate governance which is positively impacted by corporate governance code revisions exhibit a significant positive relationship between their corporate social performance and firm value.

In summary, we denote that corporate governance code revisions can act as a catalyst pushing firms to engage in more CSR and reduce agency-based CSR decision. With that, we find that firm value is positively related to corporate social performance over progressive corporate governance code revisions. The increased firm value may be due to better performance in terms of profitability, stability, growth, etc. following the practices of stakeholder management (Donaldson & Preston, 1995) because the firms can enjoy lower cost of equity financing (El Ghoul et al., 2011).

## 5.4 Robustness Tests

### 5.4.1 Subsample Regression Results by High and Low Correlation between Corporate Governance Code Revisions and Firm-level Corporate Governance Score

We conduct additional analysis by repeating the regressions of Table 4 in Table 5 based on two subsample groups: one with the observations tied with above median of the coefficient of correlation between  $CumulativeRevisions_{it}$  and  $CGScore_{it}$  adjusted by industry and country ( $Correlation_{CumulativeRevision-CGScore}$ ), and another one with the observations below the median. In Table 5, the estimate of the interaction term  $CumulativeRevision_{it} \times SocialPerformance_{it}$  is only statistically significant (coeff = 0.1843, p-value = 0.0004) in the subsample of  $Correlation_{CumulativeRevision-CGScore}$  above the median. However, the estimate of the interaction term is not statistically significant (coeff = 0.0302, p-value = 0.4144) in the subsample of  $Correlation_{CumulativeRevision-CGScore}$  below the median. With respect to the interaction terms with the dummy variables of code revisions ( $CodeRev1_{it} - CodeRev5_{it}$ ), for the subsample of  $Correlation_{CumulativeRevision-CGScore}$



**Table 5.** Subsample regression results of the moderating effect of corporate governance code revisions on the relationship between corporate social performance and firm value

	Subsamples			
	Correlation <sub>Cumulative_</sub>	Correlation <sub>Cumulative_</sub>	Correlation <sub>Cumulative_</sub>	Correlation <sub>Cumulative_</sub>
	Revision-CGScore below median	Revision-CGScore above median	Revision-CGScore below median	Revision-CGScore above median
<i>SocialPerformance<sub>it</sub></i>	-0.0693 (0.6379)	-0.7646*** (0.0001)	-0.4051 (0.1152)	-1.2519*** (0.0003)
<i>CumulativeRevision<sub>it</sub></i>	-0.0100 (0.7971)	-0.1475*** (0.0072)		
<i>CumulativeRevision<sub>it</sub> x SocialPerformance<sub>it</sub></i>	0.0302 (0.4144)	0.1843*** (0.0004)		
<i>CodeRev1<sub>it</sub></i>			-0.5095** (0.0151)	-0.9316*** (0.0006)
<i>CodeRev2<sub>it</sub></i>			-0.5942** (0.0106)	-1.2983*** (0.0000)
<i>CodeRev3<sub>it</sub></i>			-0.7514** (0.0142)	-1.4512*** (0.0005)
<i>CodeRev4<sub>it</sub></i>			-0.6889 (0.1127)	-2.0498*** (0.0022)
<i>CodeRev5<sub>it</sub></i>			-1.0805** (0.0262)	-1.8608 (0.2032)
<i>CodeRev1<sub>it</sub> x SocialPerformance<sub>it</sub></i>			0.4268* (0.0944)	0.9667*** (0.0049)
<i>CodeRev2<sub>it</sub> x SocialPerformance<sub>it</sub></i>			0.4413 (0.1087)	1.3967*** (0.0001)
<i>CodeRev3<sub>it</sub> x SocialPerformance<sub>it</sub></i>			0.6786* (0.0559)	1.6909*** (0.0007)
<i>CodeRev4<sub>it</sub> x SocialPerformance<sub>it</sub></i>			0.6435 (0.1996)	2.2266*** (0.0038)
<i>CodeRev5<sub>it</sub> x SocialPerformance<sub>it</sub></i>			2.3342*** (0.0005)	2.2472 (0.1993)
<i>InverseMills<sub>it</sub></i>	0.6118*** (0.0000)	-1.0223*** (0.0000)	0.5889*** (0.0000)	-1.0100*** (0.0000)
Constant	-0.0245 (0.9649)	8.0239*** (0.0000)	0.5449 (0.3419)	8.4374*** (0.0000)
Control variables	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Observations	4659	6533	4659	6533

Notes: \*\*\*, \*\* and \* represent the level of significance at 1%, 5% and 10%, respectively.  
The coefficients of the control variables are not reported in this table.

above the median, the estimates of all interaction terms except  $SocialPerformance_{it}$  x  $CodeRev5_{it}$  show significant positive values, with the values increasing with the progressive revisions.

Therefore, the results of Table 5 provide a twofold information. First, the significant positive moderating effect of corporate governance code revisions reveal that institutional corporate governance reforms lead to enhancement of economic value of CSR. In other words, this implies that there might have been agency issues in CSR, and the role of corporate governance is important in this context. Also, the role of corporate governance in CSR is documented in Berrone and Gomez-Mejia (2009) and Welford (2007). Therefore, in this study, we find that only firms whose corporate governance that has close positive correlation with the corporate governance code revisions exhibit positive relationship between corporate social performance and firm value.

#### 5.4.2 Re-Estimation using New Definition of Social Responsibility Score

Following Chatterji et al. (2009), Kim et al. (2014) and Yoon et al. (2019), we re-define corporate social performance by adjusting with the industry mean of the social performance score of a country. The new corporate social performance measure is undergoing transformation to preserve the relative distance between a firm's corporate social performance in the industry of a country. The industry classification here is based on the 2-digit SIC code. The formula for the measure is:

$$Ind\_SocialPerformance_{it} = \frac{(SocialPerformance_{it} \text{ of firm } i \text{ in year } t - \text{minimum of } SocialPerformance_{it} \text{ of firm } i\text{'s industry in year } t)}{\text{Maximum } SocialPerformance_{it} \text{ of firm } i\text{'s industry in year } t - \text{minimum of } SocialPerformance_{it} \text{ of firm } i\text{'s industry in year } t)}$$

With the newly defined corporate social responsibility measure ( $Ind\_SocialPerformance_{it}$ ), which takes into account the industry norms in CSR, we re-run the regressions based on Model 1 and Model 2, and we find that the main findings are unchanged, as presented in Table 6.

#### 5.5 Additional Analysis

As the impact of CSR on firm value may be driven by firm age, we argue that older firms that usually have more established governance structure and stronger relationship with the stakeholders should make the better CSR decisions that can satisfy shareholders and stakeholders. However, it is unknown how young and older firms react to the corporate governance code revisions. Therefore, we re-examine Equation 2 based on subsample of low- and high-aged firms in order to understand how firm age matters to the relationship between corporate social performance and firm value in the progressive corporate governance code revisions.

We first run using the total sample by adding firm age as the control variable. Then, we re-run the regression based on the subsamples of firm age above and below the country-adjusted mean value. The subsample regressions are able to tell how the moderating effects of the progressive corporate governance code revisions ( $CodeRev1_{it}$

**Table 6.** Regression results using industry-adjusted corporate social performance

Dependent Variable	<i>IndAdj_SocialScore</i>	<i>Tobin's Q</i>	Correlation <sub>Cumulative_Revision-CGScore</sub>	Correlation <sub>Cumulative_Revision-CGScore</sub>
	Total Sample	Total Sample	below median	above median
<i>CodeRev1<sub>it</sub></i>	-0.0284* (0.0796)	-0.5713*** (0.0049)	-0.1881 (0.4781)	-0.9575*** (0.0014)
<i>CodeRev2<sub>it</sub></i>	-0.0324* (0.0580)	-0.6481*** (0.0027)	-0.147 (0.6023)	-1.2862*** (0.0001)
<i>CodeRev3<sub>it</sub></i>	0.0373* (0.0561)	-0.7509*** (0.0072)	-0.3308 (0.3450)	-1.4575*** (0.0010)
<i>CodeRev4<sub>it</sub></i>	0.0645*** (0.0085)	-0.6717* (0.0730)	-0.0721 (0.8713)	-1.9020*** (0.0044)
<i>CodeRev5<sub>it</sub></i>	0.0362 (0.4091)	-0.3442 (0.5583)	0.3286 (0.5930)	-2.0972 (0.2933)
<i>Ind_SocialPerformance<sub>it</sub></i>		-0.4519* (0.0556)	0.1021 (0.7380)	-1.1506*** (0.0013)
<i>CodeRev1<sub>it</sub> x Ind_SocialPerformance<sub>it</sub></i>		0.5277** (0.0272)	0.1166 (0.7059)	0.9662*** (0.0075)
<i>CodeRev2<sub>it</sub> x Ind_SocialPerformance<sub>it</sub></i>		0.5738** (0.0210)	0.0453 (0.8882)	1.3038*** (0.0005)
<i>CodeRev3<sub>it</sub> x Ind_SocialPerformance<sub>it</sub></i>		0.8328*** (0.0089)	0.3824 (0.3361)	1.6388*** (0.0013)
<i>CodeRev4<sub>it</sub> x Ind_SocialPerformance<sub>it</sub></i>		0.7405* (0.0786)	0.2027 (0.6870)	1.9674*** (0.0081)
<i>CodeRev5<sub>it</sub> x Ind_SocialPerformance<sub>it</sub></i>		0.8415 (0.2161)	0.2819 (0.7020)	2.3413 (0.2815)
Constant	0.1665*** (0.0058)	2.4116*** (0.0000)	1.5828*** (0.0002)	4.2492*** (0.0000)
Inverse Mills	-0.0314 (0.2380)	0.3787*** (0.0004)	0.6651*** (0.0000)	-0.3047* (0.0601)
Control Variables	Yes	Yes	Yes	Yes
Country Effect	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes
Year Effect	Yes	Yes	Yes	Yes
Observations	11192	11192	4659	6533

Note: \*\*\*, \*\* and \* represent the level of significance at 1%, 5% and 10%, respectively.

– *CodeRev5<sub>it</sub>*) are changed by young and old firms. As shown in Table 7, the newly added variable namely *Age<sub>it</sub>* represents firm age, which is measured by the number of years since the firm *i* is incorporated till year *t* in the sample period. We find that the estimate of *Age<sub>it</sub>* is negatively related to *TobinQ<sub>it</sub>* and the effect is statistically significant (coeff = -0.1093, p-value = 0.0000). The negative effect of firm age is also found by Fauver et al. (2017) who focussed on board reforms and firm value. The signs and significance of the estimates of control variables remain unchanged. The estimates of the interaction terms are significant except for *CodeRev4<sub>it</sub> x SocialPerformance<sub>it</sub>*.

**Table 7.** Regression results of the influence of firm age

	Dependent variable: $TobinQ_{it}$		
	Total Sample	Sub-sample ( $Age_{it}$ below mean)	Sub-sample ( $Age_{it}$ above mean)
$Age_{it}$	-0.1093*** (0.0000)	-0.0605** (0.0243)	-0.1322 (0.3452)
$SocialPerformance_{it}$	-0.6514*** (0.0015)	-0.7707*** (0.0094)	-0.4658 (0.5755)
$CodeRev1_{it}$	-0.6212*** (0.0002)	-0.6872*** (0.0028)	-0.4829 (0.5044)
$CodeRev2_{it}$	-0.7035*** (0.0001)	-0.7158*** (0.0053)	-(0.5488) (0.4787)
$CodeRev3_{it}$	-0.7694*** (0.0017)	-0.7271** (0.0423)	-0.8014 (0.4138)
$CodeRev4_{it}$	-0.4937 (0.1482)	-0.7910 (0.1017)	-0.3347 (0.8203)
$CodeRev5_{it}$	-1.0292** (0.0268)	-1.7414* (0.0779)	-0.4800 (0.7172)
$CodeRev1_{it} \times SocialPerformance_{it}$	0.6333*** (0.0021)	0.6359** (0.0318)	0.5295 (0.5263)
$CodeRev2_{it} \times SocialPerformance_{it}$	0.7166*** (0.0010)	0.6254** (0.0476)	0.6215 (0.4805)
$CodeRev3_{it} \times SocialPerformance_{it}$	0.9043*** (0.0017)	0.8177* (0.0538)	0.9878 (0.3779)
$CodeRev4_{it} \times SocialPerformance_{it}$	0.5648 (0.1521)	0.8703 (0.1185)	0.3489 (0.8351)
$CodeRev5_{it} \times SocialPerformance_{it}$	1.7696*** (0.0036)	2.7382** (0.0245)	0.1560 (0.9413)
Constant	7.3397*** (0.0000)	3.8748*** (0.0000)	11.4967*** (0.0000)
Inverse Mills	-0.9124*** (0.0000)	-0.1449 (0.3533)	-2.0277*** (0.0000)
Country Variables	Yes	Yes	Yes
Country Effect	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes
Year Effect	Yes	Yes	Yes
Observations	8865	5142	3723

Note: \*\*\*, \*\* and \* represent the level of significance at 1%, 5% and 10%, respectively. Coefficients of the control variables are not reported in this table. Total sample for this analysis is reduced to 8,865 because of missing data on  $Age_{it}$ .

However, by using the subsamples comprising of firm age above and below the country-adjusted mean value respectively, we obtain similar findings from the interaction terms only in the subsample of firm age below the country-adjusted mean value. Instead, the estimates of the interaction terms are not statistically significant.

We summarise that the positive moderating effect of corporate governance code revisions on the relationship between corporate social performance and firm value are only significantly shown in low-age firms. This could be probably because low-age firms have less rigid corporate governance structure that allow them to flexibly adapt to new corporate governance recommendations throughout the progressive code revisions. Also, low-age firms tend to seize market attention by complying with new expectations of corporate governance than high-age firms. Therefore, we show that firm age is important to the moderating effect of corporate governance code revisions.

## 6. Conclusion

The extant academic literature provides extensive discussion on the integration of CSR in corporate governance agenda. This study highlights the role of institutional corporate governance reforms by examining the impacts of corporate governance code revisions on corporate social performance, as well as the moderating role of corporate governance code revisions toward the relationship between corporate social performance and firm value. We find that progressive corporate governance code revisions lead to improvement of corporate social performance. The positive impact of corporate governance code revisions on the corporate social performance creates higher firm value for the firms that strictly follow the recommendations in the revised codes of corporate governance. This supports previous findings that corporate governance is vital to eliminate agency elements in CSR that harms firm value, which can be described as killing two birds with one stone.

This study implies that the effectiveness of corporate governance code revisions is crucial as it can become a catalyst for balancing the economic value of shareholders as well as the welfare of the other stakeholders. According to institutional theory, legitimacy can influence the organisational norms, and releasing the national codes of corporate governance can create a legitimacy of practising good corporate governance. In short, this study indicates that corporate governance reform is an important driver of sustainable CSR engagement.

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