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# How Do Firms Achieve Corporate Social Performance? An Integrated Perspective

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## **Abstract**

This study provides an integrated view of the combined direct and indirect effects of the main drivers of CSR performance, at country, firm and CEO levels respectively. We extend prior literature by showing that the institutional context, firm CSR governance practices, and CSR-related compensation incentives have impacts of different magnitudes on CSR performance, as well as significant combined effects. Using an international sample of 1,272 observations over 20 countries, we document significant indirect cascading effects of the institutional setting and firm-specific governance practices on CSR performance. From a managerial perspective, we find that firms operating in countries that are less oriented towards satisfying the needs of the stakeholders still have the ability to counterbalance this institutional impact and achieve relatively high CSR performance by implementing sound firm-level CSR governance practices and incentives.

**Keywords:** Corporate social performance; Institutions; Corporate governance; Corporate social responsibility incentives

## 1 INTRODUCTION

Several studies (Ioannou & Serafeim, 2012; Cai *et al.*, 2016; Jain & Jamali, 2016) argue that firm corporate social responsibility (CSR) performance is mostly determined by country-level institutional factors. A recent study by Liang and Renneboog (2017), for instance, shows that CSR performance is strongly driven by the legal regime of the countries in which firms operate. Firms operating in so-called shareholder-oriented countries exhibit lower CSR ratings than their counterparts from stakeholder-oriented countries. Another strand of the literature focuses on the firm-specific determinants of CSR performance, such as the governance practices firms adopt as well as the CSR-based incentives they offer their managers as executive compensation (Cai *et al.*, 2016; Jain & Jamali, 2016; Gupta *et al.*, 2017; Maas, 2018; Tang *et al.*, 2018).

While the findings of these studies are of interest, they do not examine the relative impact of each of these individual factors, whether directly or indirectly, on CSR performance. This paper proposes an integrated theoretical perspective to examine the direct and indirect effects of country-level institutions and firm-specific CSR governance and compensation practices on firm CSR performance. We rely on a multiple mediator model (MMM) approach to disentangle the direct and indirect factors that affect CSR performance. Using a sample of 1,272 firms covering 20 countries, we find that country-level CSR orientation is a significant driver of a firm's CSR performance. However, firms that implement sustainability-related best governance practices, including CSR-based incentive compensation, are able to significantly improve their CSR performance, even when the institutional setting in which they operate is mostly focused on shareholders' needs.

This study contributes to the CSR literature in several ways. First, we fill a gap by quantifying the direct and indirect effects of the factors that were identified in previous studies (Ioannou & Serafeim, 2012; Cai *et al.*, 2016; Liang & Renneboog, 2017) and assess their combined effects on a firm's CSR performance. Second, our findings show that, while the

country's institutional setting plays a key role in shaping firm CSR performance, resorting to CSR-related governance and compensation practices can have a powerful mediating effect through which firms can significantly improve their CSR performance. These results extend Liang and Renneboog's (2017) conclusions by showing that firms that implement CSR-oriented governance arrangements and CSR-related incentive compensation can generate substantial positive outcomes, even when operating in shareholder-oriented countries.

The remainder of the paper is organized as follows. The next section presents the theoretical framework and research hypotheses. Section 3 describes the research methodology. Section 4 presents our empirical results. Section 5 concludes and discusses the implications of our findings.

## **2 THEORETICAL FRAMEWORK**

Figure 1 presents our theoretical model, which shows the direct and indirect effects of the three main determinants of CSR performance at the country, firm, and CEO levels, namely, the national institutional setting, the specific CSR governance practices adopted by firms, and the CSR incentives included in compensation contracts, respectively. Past studies have tackled these determinants separately. In this study, we develop an integrated view of these three mechanisms to show their combined effects as well as relative importance in determining firm CSR performance.

National institutional settings are bound to have both direct and indirect effects on how firms act toward their stakeholders. The direct effect of the institutional setting on CSR performance results from managers' efforts to comply with stakeholder expectations. For instance, according to Liang and Renneboog (2017), stakeholder-oriented countries are characterized by social norms and legal rules that impose higher expectations on firms to invest in CSR-related initiatives (employee benefits, environmental protection). Doh and Guay (2006)

further document the differential expectations regarding CSR-related activities by contrasting institutional structures and political legacies in Europe and United States.

The institutional setting also has an indirect effect on CSR performance through the CSR governance practices and managerial incentives that firms adopt. Following Williamson's (2000) claim that national institutions shape firm-level governance and incentive structures, we argue that firms operating in code law countries, which are deemed to be more stakeholder oriented (Dhaliwal *et al.*, 2012), are more likely to implement CSR governance mechanisms and to reward their executives through CSR incentives than firms in common law countries. In turn, this stakeholder-oriented behavior is deemed to foster better CSR performance.

In addition to country effects, we expect specific CSR governance practices and incentive mechanisms implemented at the firm level to play a significant role in fostering the adoption of stakeholder-oriented strategies over and above the institutional influence. We further discuss each of the three mechanisms affecting CSR performance below.

### **Insert Figure 1 here**

#### **Direct effect of country-level stakeholder orientation on corporate social performance**

The advocates of institutional theory argue that national institutions play a significant role in the economic, political, business, and socio-environmental activities (DiMaggio & Powell, 1991; Scott, 2008). Institutions are defined as widespread systems of adopted beliefs, values, norms, and rules (DiMaggio & Powell, 1983; Scott, 2008) and are organized around two major clusters: formal and informal institutions.

Formal institutions refer to the written rules, codified regulations, established standards, and compelling instructions that regulate transactions and business activities within a country (North, 1990). They include laws, property rights, and legal norms at the country level. In contrast, informal institutions refer to the commonly taken for granted and shared values,

principles, meanings, practices, and traditions predominating in a specific society (Williamson, 2000; Scott, 2008). These provide the “unwritten standards” (Scott, 2008) that shape and justify social relations among society’s constituents. National culture is a key element of informal institutions and by far the most studied in academic research (Peng et al., 2008; Ioannou & Serafeim, 2012). Moreover, institutional factors are deemed to have a significant influence on the level of managerial discretion (Crossland & Hambrick, 2011) and firms’ overall actions and behaviors, including their CSR strategies (Doh and Guay, 2006; Campbell, 2007; Höllerer, 2013; Mortano and Kostova, 2016). A firm’s survival and institutional legitimacy can be threatened if it operates beyond the boundaries of the well-established institutional norms and values prevailing in the society.

Jain and Jamali (2016) review the literature on the relation between the institutional environment and CSR outcomes. Among formal institutions, legal origin and anti–self-dealing rules have received the most attention from corporate governance scholars. Common law countries are considered shareholder-oriented societies, whereas code law countries are considered more oriented toward stakeholder demands. Considering this distinction, the legal rules prevailing in common law countries promote shareholder protection and restrict managerial discretion in corporate decisions, which can result in lower investments in CSR initiatives. Several papers (Ioannou & Serafeim, 2012; Jain & Jamali, 2016; Liang & Renneboog, 2017) confirm the negative relation between the strength of shareholder protection offered by the legal system and CSR performance. Conversely, operating in a “CSR-dense environment,” that is, locations where many firms engage in CSR-related activities, prompts firms to improve their CSR performance as well (Husted *et al.*, 2016), consistent with institutional legitimacy theory. We hence hypothesize:

**H1.** Country-level stakeholder orientation is positively and directly associated with firm social performance.

## **Direct effect of firm-level CSR governance practices on corporate social performance**

Research suggests that the board of directors is a one of the key control devices in the corporate governance system of a listed corporation (Dalton *et al.*, 1998; De Villiers *et al.*, 2011; Kock *et al.*, 2012; Jain & Jamali, 2016). Given the separation of ownership and management (Jensen & Meckling, 1976), the board has a fiduciary duty to monitor management on behalf of shareholders. The board's effectiveness in this monitoring role is contingent on the presence of independent directors, separation of the CEO and chairperson roles, the existence and composition of standing committees, and directors' shareholdings, attendance, and busyness (De Villiers *et al.*, 2011; Walls *et al.*, 2012; Ferris *et al.* 2003). The resource-based view "addresses how boards' human and relational capital lead to the provision of resources (e.g., legitimacy, advice, access to resources, and interfirm linkage) to a firm" (Haque, 2017, p. 350). Governance structure is a key factor in firms' abilities to leverage resources (Wernerfelt, 1995).

Previous research (De Villiers *et al.*, 2011; Kock *et al.*, 2012; Walls *et al.*, 2012) uses the agency model and the resource-based view to test the relation between board characteristics and CSR outcomes. For instance, De Villiers *et al.* (2011) report a positive association between board independence and CSR performance. Kock *et al.* (2012) find that firms with pro-stakeholder directors are more likely to adopt environment-friendly initiatives. More recently, Haque (2017) have shown that board independence has a positive effect on the adoption of carbon reduction initiatives.

Dixon-Fowler *et al.* (2017) argue that the set-up of sustainability-related committees among a board's standing committees can be perceived as a signal of the strategic importance of environmental issues to the directors and their commitment to effectively manage these environmental risks. Consistent with this prediction, the authors show that firms with committees dedicated to sustainability issues have better environmental performance than their peers that address these environmental risks only at the board level. Consistent with the

resource-based view, Peters and Romi (2014) find that the presence of an environmental committee on the board and the expertise of its members are positively related to voluntary environmental disclosures. In contrast, Rodrigue *et al.* (2013) argue that environmental governance mechanisms, such as CSR board committees, are used mostly for greenwashing purposes. Such devices are merely symbolic and not substantial in managing stakeholder expectations. Based on a sample of firms from environmentally sensitive industries, Rodrigue *et al.* (2013) conclude that a firm's environmental governance does not affect its environmental performance.

Another way to engage board in CSR efforts is by appointing stakeholders to the board. Crucke and Knockaert (2016) show, however, that stakeholder representation on corporate boards has negative implications for board functioning through emergence of faultlines and subsequently, negative impact on performance in relation to advising and strategic decision-making. Therefore, it is not clear what impact board-level CSR efforts have on CSR performance. Consequently, our second hypothesis is stated in a null form:

**H2.** Firm-level CSR governance practices are associated with firm social performance.

### **Direct effect of managers CSR incentives on corporate social performance**

According to agency theory, managers are considered agents who should serve the interests of the shareholders (Jensen & Meckling, 1976). If CSP is not included in their compensation scheme, opportunistic CEOs could focus only on financial performance that shapes their compensation and not engage in social responsibility initiatives that are not rewarded (Hong *et al.*, 2016; Haque, 2017). Focusing on other stakeholders' issues typically reduces CEO compensation and jeopardizes CEO wealth (Coombs & Gilley, 2005). Therefore, CSP incentives can be viewed as a way to align the interests of CEOs and firm stakeholders (Kolk



& Perego, 2014). In this sense, a monetary incentive should increase agents' efforts (Jensen & Murphy, 1990) and lead to greater CSP.

While theory would predict a positive relationship between CSR-related incentives and CSR performance, results of empirical studies paint a more mixed picture. Several studies find a negative relation between the two. For instance, Ims *et al.* (2014) show that economic incentives can crowd out intrinsic values and thus reduce the motivations of CEOs to engage in CSR-enhancing activities. Prior studies in the fields of psychology and economics show that external rewards can reduce the intrinsic motivation of the actors (Bénabou & Tirole, 2006; Berrone & Gomez-Mejia, 2009). The experimental study of Ariely *et al.* (2009) shows that subjects are less motivated to be charitable if they benefit from a monetary incentive. The monetary reward they receive dilutes the message that they are doing good because their actions are perceived as not totally disinterested. Consequently, CSR incentives could have a similar perverse impact. Managers could be less motivated to engage in CSR activities if they are paid for to do it, rather than being intrinsically committed to do good (Eccles *et al.*, 2012).

Other studies show no significant relationship between inclusion of CSR incentives in compensation contracts and CSR ratings. Bonuses linked to sustainable actions are perceived as merely symbolic. Kolk and Perego (2014) note that, while CSR incentives can signal corporate awareness to stakeholders, they can also be seen as a form of window dressing strategy to legitimize bonuses. In a recent study, Maas (2018) finds that overall CSR targets do not have a significant impact on CSR performance. Only those targets that are qualified as hard ones, that is, with quantitative measurements, tend to have a negative impact on CSR weaknesses. Soft targets seem to merely serve as symbols to raise awareness of sustainability issues. Eccles *et al.* (2012) show that, due to the crowding out effect, monetary incentives have a significant negative effect on carbon emissions reduction.

Yet other studies find a positive link between CSR-related targets in compensation plans and CSR performance. For instance, Flammer *et al.* (2019) find that the integration of CSR incentives in executive compensation plans promotes greater social initiatives and environmental innovations and lower levels of carbon emissions. Kock *et al.* (2012) show that use of equity in the compensation contracts is sufficient to induce managers to focus on environmental performance as equity-based compensation leads to long-term orientation and makes managers more willing to exhibit high effort and commitment to environmental strategies, which do not lead to immediate payoff.

While theory predicts a positive relationship between the use of CSR targets in incentive compensation and firm CSR performance, the mixed empirical findings set ground for further exploration of the phenomenon. One possible explanation for the inconsistency of the empirical results is the piece-meal approach to examining the relationship between the two – i.e., whether CSR incentives impact CSR performance may be context-specific and dependent on institutional and firm-specific governance factors. As our study is global and examines different institutional and governance contexts, we hypothesize a positive relationship between the use of CSR incentives in compensation contracts and CSR performance. Our third hypothesis is stated as follows:

**H3.** Firm-level CSR incentives in CEO compensation plans are positively and directly associated with firm social performance.

### **Indirect effects of country-level stakeholder orientation on corporate social performance**

We argue that the conflicting evidence results from the absence of an integrative approach to study country- and firm-level direct and indirect effects on CSR performance. On one hand, several studies focus on the role of institutional context on CSR (Campbell, 2007; Cai *et al.*,

2016) but do not disentangle precisely the mechanisms at play. Other studies on the role of corporate governance and CSR performance incentives, mainly in the United States and the United Kingdom, do not take into account direct and indirect institutional impacts (Maas, 2018). In this study, we fill this gap by considering the joint effect of institutional and firm-level governance and CSR performance incentives. By using an MMM with two different estimation techniques—ordinary least squares (OLS) and structural equation modeling (SEM)—this study contributes to the literature by clearly and robustly articulating findings from previous studies in an integrated fashion, showing precisely the relative intensity of each factor, as well as considering the direct and indirect effects of such factors on CSR performance.

Prior sections describing direct effects, and leading to the first three hypotheses, show the predicted relationships between each of the three factors – stakeholder orientation, CSR governance practices and CSR incentives – and CSR performance. While the link between each of those three factors and CSR performance may be direct, it is also likely that each of the three factors impact performance through each other (i.e., indirectly). For instance, stakeholder orientation may directly lead to better CSR performance due to the management’s desire to adhere to social norms of the country. However, part of its impact may come from its effect on firm’s governance practices or compensation choices, which in turn impact CSR performance. Any hypothesis about an indirect effect hinges on establishing a possible link among the three factors: stakeholder orientation, CSR governance, and CSR incentives.

Firm-level corporate governance is largely shaped by the institutional context within which the firm operates. Country-level characteristics, of which shareholder protection is an integral part, explain far more variation in firm governance choices than firm-level characteristics (Doidge *et al.*, 2007). Several corporate governance practices are linked to the composition and structure of the board. The nature of board structure and its operating mode, one would expect, is influenced by firm’s operating environment, including the extent to which

stakeholders matter to firm's management. The nature of board members' roles, for instance, is often determined by stakeholders' expectations (Huse and Rindova, 2001). Given this generalized influence of country-level characteristics, including shareholder versus stakeholder orientation, on corporate governance structure, we expect that stakeholder orientation will similarly and directly impact CSR-specific governance choices, such as whether to have a CSR committee. Having established a direct link between CSR-governance and CSR performance in Hypothesis 2, we can combine the two direct links to hypothesize that stakeholder orientation will indirectly affect CSR performance through its impact on firm's specific CSR-related governance choices. Accordingly, we state our fourth hypothesis as follows:

**H4a.** Country-level stakeholder orientation is positively and indirectly associated with firm social performance through firm-level CSR governance practices.

One of the key responsibilities of the board is to decide how to compensate its firm's CEO. Some decisions to be made in regards to compensation include the ratio of cash to equity, but also the measures and appropriate targets against which the CEO is to be evaluated. While individual boards have freedom to make these decisions, the choices are largely influenced by the norms in the country where the firms operate. Countries' institutional configurations, including capital and labor institutions that prevail, level of development, and market forces shape the way CEOs are compensated (Greckhamer, 2016). Anecdotally, use of CSR-related targets is much more common in some countries compared to others. For instance, European countries, including France, Germany, Netherlands and UK stand out in the frequency of CSR measures used in the compensation contracts.<sup>1</sup> Incidentally, these countries are the ones scoring higher on the stakeholder orientation index, lending credibility to the argument that country-level stakeholder orientation is associated with the use of CSR incentives in CEO compensation plans. Having

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<sup>1</sup> Linking CSR Performance with Pay Sends Clear Sustainability Signal, The Guardian, available at: <https://www.theguardian.com/sustainable-business/linking-csr-pay-sustainability>

established a direct link between compensation and CSR performance in H3 above, we state our formal hypothesis about an indirect link between stakeholder orientation and CSR performance via compensation choices as follows:

**H4b.** Country-level stakeholder orientation is positively and indirectly associated with firm social performance through firm-level CSR incentives in CEO compensation plans.

Firm governance practices are key in determining CEO compensation. Boards, usually through their compensation committees, are directly responsible for selecting compensation structure which leads to the achievement of corporate goals (Daily *et al.*, 1998). Hong *et al.* (2016) examine the relation between corporate governance quality and sustainability-based executive compensation among Standard & Poor's 500 firms. Their findings show that firms adopting shareholder-friendly governance provisions are more likely to provide CSR-based incentives in the design of executive compensation packages. Studies show that the structure of firm's governance plays a role in whether and how compensation contracts take into account CSR-related performance goals. While the use of CSR-related targets is influenced by many factors, including firm's industry, firms with better governance structures are generally more likely to utilize CSR-contingent compensation (Ikram *et al.*, 2019).

Having previously established that country-level stakeholder orientation may be directly linked to CSR-governance, that CSR governance practices may impact use of CSR incentives, and that CSR-related incentives may be linked to CSR performance (H3), we state our hypothesis regarding an indirect positive impact of stakeholder orientation on CSR performance via CSR governance and subsequently, CSR-related incentive choices, as follows:

**H4c.** Country-level stakeholder orientation is positively and indirectly associated with firm social performance through firm-level CSR governance practices and CSR incentives in CEO compensation plans.

## **Indirect effects of CSR corporate governance practices on corporate social performance**

As discussed in the development of H4c above, CSR-related governance practices are hypothesized and previously found to be associated with use of CSR-related incentives. Hypothesis 3 states our belief that CSR related incentives are directly linked with CSR performance. Combining the two leads us to posit that CSR related governance has an indirect effect on CSR performance through its impact on incentive target choices, which in turn impact CSR performance. Our fifth hypothesis is stated as follows:

**H5.** Firm-level CSR governance practices are positively and indirectly associated with firm social performance through CSR incentives in CEO compensation plans.

## **3 RESEARCH METHODOLOGY**

### **Sample**

Our sample is composed of 1,272 firms from 20 countries in 2014 for which CSR-related data are available. Data on CSR scores, CSR governance, and CSR performance incentives are obtained from Sustainalytics.<sup>2</sup> Financial data are drawn from Worldscope. To ensure the robustness of our results, we exclude countries with fewer than 10 observations. Table 1 shows the industry distribution of the sample and shows that all industries are well represented, with most firms falling within the categories of industrial, financial, or consumer products and services.

**Insert Table 1 here**

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<sup>2</sup> Sustainalytics is a global leader in environmental, social, and governance (ESG) and corporate governance research and ratings. It supports hundreds of the world's foremost investors who incorporate ESG and corporate governance insights into their investment processes (see <https://www.sustainalytics.com>).

## Data

### *Dependent variable*

We measure CSR performance by calculating the average rating of Sustainalytics' environmental and social dimensions, but excluding the governance pillar from this score. Sustainalytics is a major ESG ratings company whose data are widely used in academic research (Berrone *et al.*, 2007; Prior *et al.*, 2008; Surroca *et al.*, 2010; Wolf, 2014; van Duuren *et al.*, 2015; Garcia-Castro & Francoeur, 2016). Sustainalytics calculates social and environmental performance by examining data from multiple sources, including firm disclosures, secondary data sources, as well as third-party specialized data providers. A total of around 60 to 100 indicators are included in the rating and weighted based on the industry in which the firm operates in order to measure social and environmental performance more precisely. To account for temporal ordering and to diminish the issue of causality for the dependent variable, we measure CSR performance for firm  $i$  in period  $t + 1$  (i.e., we take the 2015 CSR score).<sup>3</sup>

### *Explanatory variables*

Stakeholder orientation is measured using the scores of Dhaliwal *et al.* (2012), standardized to a range from zero to one. Countries with higher values are considered to be more stakeholder oriented. We measure the quality of CSR governance practices using the Sustainalytics raw indicator G.2.5, which assesses whether the oversight of CSR issues is explicitly discussed at the board level and assigned to a specific committee. Previous research (Dixon-Fowler *et al.*, 2017; Haque, 2017) suggests that oversight at the senior board level signals a firm's commitment to CSR issues. CSR performance incentives measure the extent to which CEO variable compensation is linked to CSR objectives such as health and safety and environmental

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<sup>3</sup> The use of MMM for 2012 and 2013 leads to similar results.

targets. We use the Sustainalytics raw indicator G.2.6, ESG performance targets, to measure this component.

We control for several variables deemed to have an impact on CSR performance. Similar to Maas (2018), we control for firm size, using the natural logarithm of total assets, and financial performance, as measured by return on equity (ROE). We also include leverage, measured as total debt scaled by total assets; the market-to-book value ratio (MTBV) (Fabrizi *et al.*, 2014); and research and development (R&D) (McWilliams & Siegel, 2001). All control variable measures are drawn from Worldscope and are further defined in the Appendix.

Table 2 shows the sample distribution by country, the value of our stakeholder orientation measure derived from Dhaliwal *et al.* (2012), and the average level of CSR performance for each country as measured by Sustainalytics. Countries with the highest stakeholder orientation are Denmark and Sweden and the two countries with the lowest stakeholder orientation (i.e., those that are the most shareholder oriented) are Korea and the United States.

**Insert Table 2 here**

### **Multiple Mediator Model**

Our model, depicted in Figure 1, shows the path relation between an antecedent variable X (stakeholder orientation) and a consequent variable (CSR performance) both directly and through two serial mediating variables, M1 and M2 (CSR governance practices and CSR incentives, respectively). As highlighted by Hayes (2018), the MMM approach enables disentangling both the direct and indirect effects of the factors involved. It also allows to determine the relative influence of these factors. Indirect effects are intermediated throughout the two mediators and can follow three pathways:

$$X \rightarrow M1 \rightarrow Y$$



$X \rightarrow M2 \rightarrow Y$

$X \rightarrow M1 \rightarrow M2 \rightarrow Y$

In fact, X can influence Y through its influence on M1, which is influencing Y, through its influence on M2, which is also influencing Y, and through both M1 and M2 sequentially, with M1 affecting M2 and M2 affecting Y. In addition to the indirect path, X can influence Y directly, without passing through either M1 or M2.

By using a multiple mediation model we intend to capture the direct and indirect paths that influence CSR performance and, ultimately assess the extent to which each of these paths leads to an increase in CSR performance. In essence, we open the black box of the different channels through which stakeholder orientation, CSR governance practices and CSR incentives influence CSR performance.

The relation between stakeholder orientation and CSR performance follows different channels. Stakeholder orientation is assumed to have not only a direct effect on CSR performance but also indirect effects, since it can influence CSR governance and CSR incentives, which, in turn, affect CSR performance. The overall effect can be measured by computing the effect of all paths.

Mediating models are becoming widely used by management scholars to better understand underlying mechanisms that connect driving factors and outcomes (Aguinis *et al.*, 2017). The classic mediating approaches put forward by Baron and Kenny (1986) and Sobel (1986) have been recently challenged by Preacher and Hayes (2004), Zhao *et al.* (2010), Malhotra *et al.* (2014), and Aguinis *et al.* (2017) who propose statistical refinements. These improvements mainly highlight that the direct effect significance prerequisite of Baron and Kenny (1986) is not necessary, since the relation can be fully mediated (Malhotra *et al.*, 2014). Further, the normal distribution of the product of coefficients assumed by Sobel (1986) is very restrictive and hardly compatible with MMMs and should be replaced by bootstrapping for

large samples (Aguinis *et al.*, 2017; Hayes, 2018). According to the recent work of Hayes (2018), bootstrap sampling is the best-fitted methodology and has been used to compute the confidence intervals of coefficients without having to make any assumptions about the sample distribution.<sup>4</sup>

The two major empirical tests to assess MMMs are either regression-based approaches of PROCESS (Preacher & Hayes, 2004, 2008) or SEM (Aguinis *et al.*, 2017; Hayes *et al.*, 2017). The main difference lies in the assumptions of both approaches, with SEM solving the entire system simultaneously and using maximum likelihood and PROCESS relying on step-by-step OLS regression. While some recommend SEM (Pek & Hoyle, 2016), the results mostly converge and are not affected by the choice of methodology for models with no latent variables (Hayes *et al.*, 2017; Rijnhart *et al.*, 2017). To ensure the robustness of our results, we use both approaches in our analyses and obtain similar results.

#### **4 Results**

Table 3 shows that the average CSR performance score is 0.603 out of a maximum of one. This score varies from a minimum of 0.36 to a maximum of 0.905, with a standard deviation of 0.111. Stakeholder orientation is scaled from zero to one, with a mean of 0.283. The high number of companies from Japan and the United States, two strongly shareholder-oriented countries, tend to lower the mean. The mean CSR governance score of 0.641 shows that the companies in our sample have adopted fairly sound CSR governance practices. CSR incentives are less common, with a mean of 0.128 out of one. The average size measured by the natural logarithm of total assets is 16.4 (or USD 13.7 billion in total assets), suggesting that the firms in our sample are relatively large.

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<sup>4</sup> We use the PROCESS macro developed by Hayes (2018), including two mediators (model 6)—CSR governance and CSR incentives—with 10,000 bootstrap resamplings. Our results are robust to other resampling sizes, such as 1,000, 5,000, and 50,000.

**Insert Table 3 here**

Table 4 shows that stakeholder orientation is positively correlated with CSR incentives and performance. In turn, CSR governance and incentives are positively related to CSR performance. Larger firms are associated with higher levels of CSR performance, CSR governance practices, and CSP incentives. Furthermore, the correlation coefficients between the dependent variables are relatively low, which suggests that multicollinearity is not a serious concern in our multivariate analysis. To address this potential problem, we control for the variance inflation factors (VIFs) that are displayed for each regression and find the coefficients to be much lower than the recommended threshold of 10 (Neter, Wasserman and Kutner, 1985).

**Insert Table 4 here**

Table 5 displays the results of MMMs that test the relation between stakeholder orientation, CSR governance, CSR incentives, and CSR performance. We perform these tests using a standard OLS regression model (Panel A) and a simultaneous equation approach (Panel B). While the two models yield almost identical results in our estimation, we present both of the models to demonstrate that the OLS estimation results are not significantly affected by measurement error. The similarity of the results using both methodologies gives us confidence that our results are robust to the specification chosen.

In both estimations, model 1 tests the effect of stakeholder orientation on CSR governance. The results show that stakeholder orientation is significantly and positively associated with the implementation of sound CSR governance practices. Model 2 shows that stakeholder orientation and CSR governance practices are both significant determinants of the adoption of CSR incentives. Model 3 shows three significant determinants of CSR performance, namely, country-level stakeholder orientation, the CSR governance practices that companies adopt, and the CSR incentives that are embedded in compensation packages. H1, H2 and H3

are therefore supported. These direct effects are consistent with previous studies (McWilliams & Siegel, 2001; Liang & Renneboog, 2017; Maas, 2018). In the following analyses, we go one step further by measuring the direct and indirect effects of these mechanisms on CSR performance. This allows us to obtain a more complete view of the total effects of the three mechanisms and their relative roles in influencing CSR performance.

**Insert Table 5 here**

Table 6 and Figure 2 show the results of the significant direct and indirect effects of the three main variables on CSR performance, using an MMM.<sup>5</sup> Stakeholder orientation has a direct effect of 0.114 on CSR performance, whereas CSR governance and CSR compensation incentives have direct effects of 0.108 and 0.036, respectively.

The indirect effects of stakeholder orientation on CSR performance stem from three channels. The indirect effect through CSR governance is 0.011 and the indirect effect through CSR incentives is 0.005; H4a and H4b are therefore supported. Finally, the combined indirect effect through CSR governance and CSR incentives is 0.001 which confirms H4d. The total effect of stakeholder orientation can then be calculated as the sum of its direct effect of 0.114 and indirect effects of 0.017 (0.011 + 0.005 + 0.001). Similarly, the indirect effect of CSR governance on CSR performance through CSR incentives is 0.005; which indicates support for H5. The total effect of CSR governance of 0.113 is composed of a direct effect of 0.108 plus an indirect effect of 0.005.

**Insert Table 6 and Figure 2 here**

Figure 3 uses the factors presented in Table 6 to translate these results into eight case scenarios to summarize the relative importance of each factor. The first case presents a firm that operates in a shareholder-oriented country (e.g., the United States or Korea) and

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<sup>5</sup> The confidence intervals are set at 95 percent. The number of bootstrap samples is 10,000.

implements poor CSR governance practices but has CSR incentives in its CEO compensation packages. A factor of 0.036 is obtained, which corresponds to its direct effect on CSR performance. At the other end of the spectrum, firms operating in stakeholder-oriented countries that have sound CSR governance practices in place and CSR incentives in their CEO compensation yield a combined effect of 0.280. This combined effect can be broken down into three components: first, the direct and indirect effects of the institutional setting (stakeholder orientation), namely,  $0.114 + 0.011 + 0.005 + 0.001 = 0.131$ , and, second, the direct and indirect effects of CSR governance practices, 0.108 and 0.005, respectively, for a total of 0.113. Lastly, the direct effect of the CSR incentives must be added. Therefore, the total effect is calculated as  $0.131 + 0.113 + 0.036$ , for a total of 0.280.

In essence, the results indicate that stakeholder orientation is a significant standalone factor impacting CSR performance. However, firms operating in a shareholder-oriented environment can substantially improve their CSR performance if they implement sound governance and incentive practices. Figure 3 shows that these practices yield a combined effect of 0.149, with direct and indirect effects of CSR governance practices of 0.113 ( $0.108 + 0.005$ ) plus the direct effect of CSR-related incentives of 0.036. This combined effect is higher than that yielded by firms in stakeholder-oriented countries without similar policies in place (a sole direct effect of 0.114).

**Insert Figure 3 here**

## **5 Conclusion**

Previous studies have thoroughly examined the determinants of CSR performance and studies examining factors such as country-level institutions and firm-specific characteristics abound. While these studies are not always conclusive or consistent in their findings, it is generally understood that both country-level institutions and firm-specific factors can influence CSR

performance. Further, prior studies do not allow disentanglement and assessment of the true impact of country-level factors from firm-specific factors, even though country-level factors are bound to impact firm-level factors and those, in turn, impact CSR performance. Our study fills the gap by quantifying both the direct and indirect effects of the country-level institutional setting (stakeholder- versus shareholder-orientation), the firm's CSR-related governance practices and the CSR related incentives in compensation plans as well as the combined effect of these factors on CSR performance.

Using MMM and two different estimation techniques (OLS and SEM) and based on an international sample of 1,272 observations covering 20 countries, we find that the implementation of firm-specific governance and incentive schemes focused on CSR yields substantial benefits, even to firms in countries already favorably predisposed to address stakeholder concerns. Our results show that, even in countries that are less stakeholder oriented, such as the United States, firms can achieve high CSR performance if they implement sound CSR-related governance and compensation practices; for instance setting up a dedicated CSR committee within the board and including sustainability related incentives in executive compensation plans. It is then possible to overcome the impediment of operating in a shareholder-friendly environment, to the extent that a firm desires to do so, by implementing CSR-related governance and incentive schemes and ultimately achieve higher CSR performance. Consequently, our study shows that, outside of operating in economies that promote CSR performance, CSR-focused firm-level governance can be a substitute mechanism for stakeholder-friendly country-level institutions.

These findings call for future research avenues. This integrating model may for instance be enlarged in following Williamson (2000) in taking into account cultural determinants as an antecedent of countries orientation.

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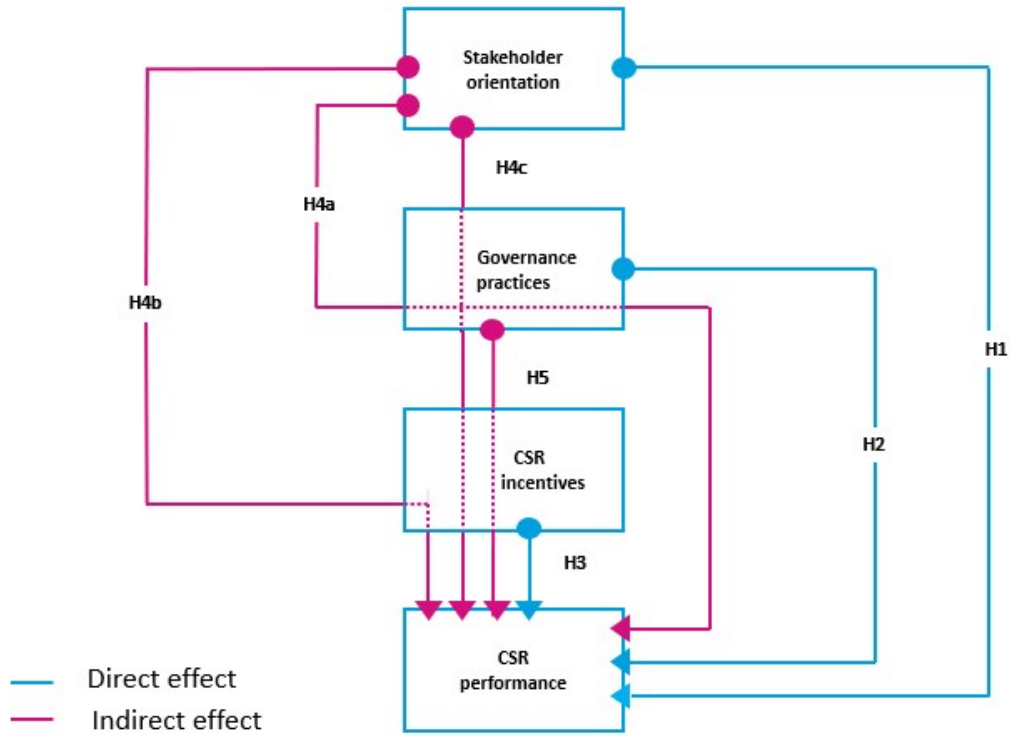
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## Appendix

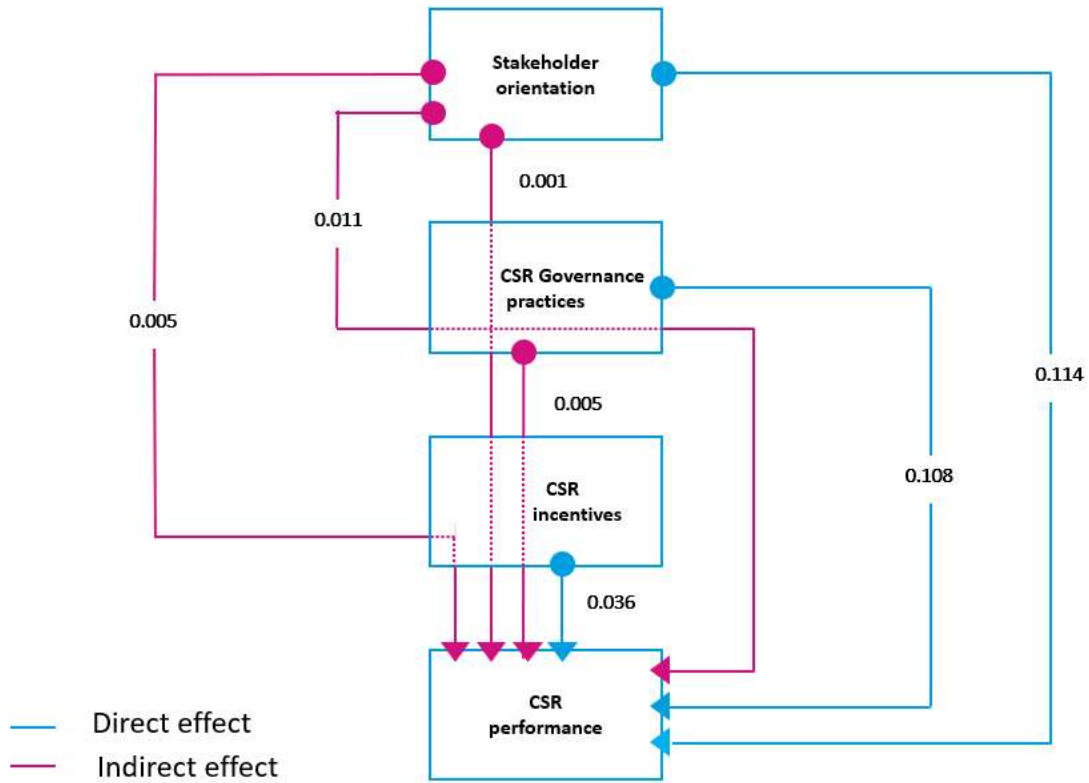
### Variable descriptions

Variable	Description	Source
CSR performance	A score of social and environment performance provided by Sustainalytics.	Sustainalytics
Stakeholder orientation	Based on the <i>Stake</i> variable of Dhaliwal <i>et al.</i> (2012) and scaled between 0 and 1, where stakeholder orientation = $(\text{Stake} - \text{Min}(\text{Stake})) / (\text{Max}(\text{Stake}) - \text{Min}(\text{Stake}))$ .	Dhaliwal <i>et al.</i> (2012)
CSR governance practices	This indicator assesses the quality of a company's governance structure and practices that impact the company's social and environmental responsibilities.	Sustainalytics
CSR incentives	This indicator assesses whether part of executive compensation is explicitly linked to CSR performance targets.	Sustainalytics
Size	Natural logarithm of the firm's total assets.	Worldscope
ROE	$(\text{Net income} - \text{preferred dividends}) / \text{average of last year's and current year's common equity}$ .	Worldscope
Leverage	Total debt/total assets.	Worldscope
MTBV	Market value of common equity divided by the book value of common equity.	Worldscope
R&D	R&D expenses/net sales.	Worldscope

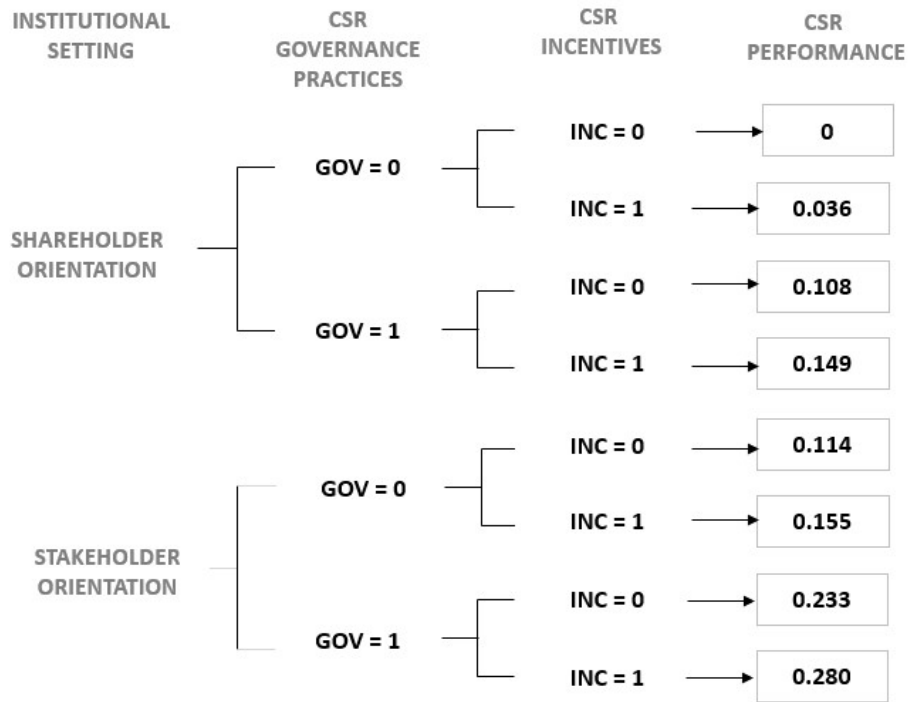
**Figure 1**  
**Theoretical model**



**Figure 2**  
**Direct and indirect effects on CSR performance:**  
**Multiple mediator model**



**Figure 3**  
**Case scenarios**



**Table 1. Sample distribution by industry**

<b>Industry</b>	<b>N</b>
Basic materials	119
Consumer goods	168
Consumer services	160
Financials	279
Health care	44
Industrials	261
Oil and gas	81
Technology	48
Telecommunications	35
Utilities	77
Total	1,272

**Table 2. Sample distribution by country**

<b>Country</b>	<b>Stakeholder orientation</b>	<b>Mean CSR performance</b>	<b>N</b>
Denmark	1.000	0.641	10
Sweden	0.989	0.697	23
Norway	0.927	0.638	13
Finland	0.765	0.717	11
Australia	0.697	0.606	50
Netherlands	0.684	0.641	30
Switzerland	0.644	0.610	37
Belgium	0.633	0.657	12
Austria	0.624	0.607	21
France	0.595	0.694	67
Germany	0.527	0.646	73
Canada	0.471	0.580	71
United Kingdom	0.451	0.642	64
Italy	0.327	0.689	23
Spain	0.254	0.706	23
Singapore	0.217	0.554	26
Japan	0.137	0.582	311
Hong Kong	0.102	0.575	35
United States	0.004	0.563	340
South Korea	0.000	0.640	32
Total			1,272

**Table 3. Descriptive statistics**

	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Std Dev</b>	<b>Min</b>	<b>Max</b>
<b>CSR performance</b>	1,272	0.603	0.590	0.111	0.360	0.905
<b>Stakeholder orientation</b>	1,272	0.283	0.137	0.279	0.000	1.000
<b>CSR governance</b>	1,272	0.641	1.000	0.384	0.000	1.000
<b>CSR incentives</b>	1,272	0.128	0.000	0.299	0.000	1.000
<b>Size</b>	1,272	16.433	16.317	1.301	12.625	19.717
<b>ROE</b>	1,272	0.107	0.101	0.075	-0.146	0.369
<b>Leverage</b>	1,272	0.242	0.229	0.157	0.000	0.749
<b>MTBV</b>	1,272	1.952	1.690	1.053	0.320	5.300
<b>R&amp;D</b>	1,272	0.011	0.000	0.021	0.000	0.117



**Table 4. Correlation matrix**

	<b>CSR performance</b>	<b>Stakeholder orientation</b>	<b>CSR governance</b>	<b>CSP incentives</b>	<b>Size</b>	<b>ROE</b>	<b>Leverage</b>	<b>MTBV</b>	<b>R&amp;D</b>
<b>CSR performance</b>	1.000								
<b>Stakeholder orientation</b>	0.281***	1.000							
<b>CSR governance</b>	0.501***	0.051*	1.000						
<b>CSR incentives</b>	0.266***	0.129***	0.244***	1.000					
<b>Size</b>	0.243***	-0.092***	0.209***	0.122***	1.000				
<b>ROE</b>	-0.027	-0.020	-0.022	0.035	-0.039	1.000			
<b>Leverage</b>	0.054*	-0.029	0.053*	0.091***	0.085***	-0.038	1.000		
<b>MTBV</b>	-0.026	-0.007	-0.065**	0.019	-0.247***	0.577***	0.027	1.000	
<b>R&amp;D</b>	0.171***	-0.064**	0.058**	-0.074***	-0.156***	0.040	-0.139***	0.130***	1.000

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table 5. Direct effects on CSR governance, CSR incentives and CSR performance**

**Panel A: OLS with Sustainalytics data**

Antecedent	Consequent								
	Model 1, CSR governance			Model 2, CSR incentives			Model 3, CSR performance		
	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p
Stakeholder orientation	0.102	0.038	0.007***	0.143	0.031	0.000***	0.114	0.009	0.000***
CSR governance	-	-	-	0.126	0.021	0.000***	0.108	0.007	0.000***
CSR incentives	-	-	-	-	-	-	0.036	0.009	0.000***
Size	0.082	0.008	0.000***	0.025	0.007	0.000***	0.021	0.002	0.000***
ROE	0.207	0.163	0.204***	0.162	0.152	0.287***	-0.056	0.042	0.182***
Leverage	0.040	0.068	0.556***	0.031	0.048	0.509***	0.017	0.015	0.283***
MTBV	-0.023	0.013	0.078***	0.018	0.010	0.068***	0.005	0.003	0.089***
R&D	1.660	0.561	0.003***	-0.703	0.413	0.089***	0.930	0.147	0.000***
Constant	-0.589	0.142	0.000***	-0.328	0.116	0.005***	0.147	0.034	0.000***
Industry dummy		Yes			Yes			Yes	
R <sup>2</sup>		0.1592			0.1689			0.4238	
F		20.91			13.31			38.70	
p		0.000			0.000			0.000	
Mean VIF		1.47			1.48			1.48	
N		1,272			1,272			1,272	

**Panel B: SEM with Sustainalytics data**

Antecedent	Consequent								
	Model 1, CSR governance			Model 2, CSR incentives			Model 3, CSR performance		
	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p
Stakeholder orientation	0.102	0.036	0.005***	0.143	0.028	0.000***	0.114	0.009	0.000***
CSR governance	-	-	-	0.126	0.022	0.000***	0.108	0.007	0.000***
CSR incentives	-	-	-	-	-	-	0.036	0.009	0.000***
Size	0.082	0.009	0.000***	0.025	0.007	0.000***	0.021	0.002	0.000***
ROE	0.207	0.164	0.207	0.162	0.127	0.203	-0.056	0.040	0.159
Leverage	0.040	0.067	0.550	0.031	0.052	0.543	0.017	0.016	0.302
MTBV	-0.022	0.012	0.070*	0.018	0.010	0.057*	0.005	0.003	0.088*
R&D	1.659	0.566	0.003***	-0.703	0.440	0.110	0.930	0.137	0.000***
Constant	-0.589	0.147	0.000***	-0.328	0.114	0.004***	0.147	0.036	0.000***
Industry dummy		Yes			Yes			Yes	
Log likelihood					704.9101				
N					1,272				

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table 6. Direct and indirect effects on CSR performance using MMM with Sustainalytics data**

	<b>Effect on CSR performance</b>	<b>SE</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Direct effects</b>					
Stakeholder orientation	0.114	0.009	0.000***	0.096	0.132
CSR governance	0.108	0.007	0.000***	0.094	0.123
CSR incentives	0.036	0.009	0.000***	0.017	0.054
<b>Indirect effects</b>					
		<b>Boot SE</b>		<b>Boot LLCI</b>	<b>Boot ULCI</b>
Stakeholder orientation → CSR governance	0.011	0.004		0.003	0.019
Stakeholder orientation → CSR incentives	0.005	0.002		0.002	0.010
Stakeholder orientation → CSR governance → CSR incentives	0.001	0.000		0.000	0.001
<b>Total effect of stakeholder orientation</b>	<b>0.131</b>	0.010	0.000***	0.111	0.151
CSR governance → CSR incentives	0.005	0.001		0.002	0.008
<b>Total effect of CSR governance</b>	<b>0.113</b>	0.007	0.000***	0.098	0.127

SE = standard error; p = p-value; LLCI = lower limit confidence interval; UCLI = upper limit confidence interval. The level of confidence for all confidence intervals is 95 percent; the number of bootstrap samples for the percentile bootstrap confidence intervals is 10,000. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$