

# The effect of the size of the board of directors on corporate social performance: A meta-analytic approach

## ABSTRACT

This paper examines the influence of the size of firms' board of directors on corporate social performance through a meta-analytic perspective. To that end, a sample of 80 articles that draw on evidence from more than 80,000 international companies, published between 1997 and 2018, was examined. This paper analyzes the moderating effect of a set of corporate governance mechanisms such as board composition and corporate governance systems on the hypothesized relationship between the size of firms' board and corporate social performance. Our central results reveal that larger and more independent boards better represent stakeholders' sensitivities and allow companies to achieve their social objectives. Moreover, that connection is more positive and stronger in companies with more independent boards and in countries that have codified law, which often have fewer mechanisms to protect shareholders' interests.

**Keywords:** Size of boards, Corporate governance, Corporate social performance, Sustainable development.

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## 1. INTRODUCTION

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In last few years, corporate governance (CG) has emerged as one of the most significant keys to the so-called "sustainable revolution" (Elkington, 1997). In fact, the need to incorporate sustainability-related issues into the CG agenda is motivated by: i) the view of firms' management as a driver of change towards sustainable development (Elkington, 2006; Galbreath, 2012); and, ii) the need for companies to engage in a dialogue with their stakeholders. Among CG mechanisms, board diversity has received considerable attention from academics (Luoma & Goodstein, 1999; Mallin, Michelon, & Raggi, 2013). This is mainly motivated by the view that larger boards facilitate stakeholder participation in firms' decision-making processes, and thus stimulating firms to contribute to sustainability. De Villiers, Naiker and van Staden (2011) argue that those companies with larger boards of directors are more likely to increase the richness of expertise required to enhance corporate social performance (CSP). Accordingly, size of the board has been considered a CG variable that affects corporate financial and social efficiency (Cuadrado-Ballesteros, García-Rubio, & Martínez-Ferrero, 2015; Post, Rahman, & Rubow, 2011; Tauringana & Chithambo, 2015).

Previous research has extensively analyzed the effect of board size on CSP, often providing vexing, contradictory and inconclusive results (see García Martín & Herrero, 2019). Jain and Jamali (2016) conducted a systematic review of 94 academic articles focused on addressing the impact of several CG mechanisms on CSP and they reported contradicting results. While some studies found a positive connection between board size and CSP (de Villiers et al., 2011; Hillman, Keim, & Luce, 2001; Marquis & Lee, 2013; McGuinness, Vieito, & Wang, 2017; Oh, Chang, & Cheng, 2016; Tauringana & Chithambo, 2015), others concluded that board size negatively affects CSP (Bai, 2013; Kassinis & Vafeas, 2002; Prado-Lorenzo & Garcia-Sanchez, 2010). Moreover, the existing literature also includes studies reporting no relationship between board size and CSP (see Beiner, Drobetz, Schmid, & Zimmermann, 2006; Cheung, Jiang, Limpaphayom, & Lu, 2010; Kaczmarek, Kimino, & Pye, 2012).

In the context of this controversy, this paper contributes to the literature in several ways. Firstly, this paper contextualizes past research about the connection between firms' board size and CSP from a meta-analytic perspective. Secondly, this study complements previous research that connects board size and corporate financial performance (CFP) (Dalton, Daily, Johnson, & Ellstrand, 1999; Van Essen, van Oosterhout, & Carney, 2012) by addressing the social outcomes of increasing the board's diversity. Thirdly, we respond to a call made by previous research (Dalton et al., 1999; Van den Berghe, Lutgart AA & Levrau, 2004) for the analysis of the mutual dependence and complementarity between different CG mechanisms, in order to identify those approaches that have a real influence on organizational outcomes. To that end, this study analyzes different moderating variables (i.e., board composition,

corporate governance systems and shareholder protection measures) from the bundle of governance mechanisms perspective (Rediker & Seth, 1995), in which it is considered that the optimal governance structure is a combination of different mechanisms, rather than being dependent on the effectiveness of a particular governance standard or practice.

This paper is organized as follows. Section 2 introduces the theoretical background, including the literature review and establishes the research hypotheses. Section 3 describes data collection procedures, inclusion criteria and the econometric notations of the meta-analytic and meta-regression approach. Section 4 presents and discusses the results of the empirical study. Finally, the last section includes the conclusions, limitations and avenues for future research.

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## **2. LITERATURE REVIEW AND HYPOTHESES**

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Stakeholder theory argues that a larger and more diverse board brings greater opportunities for more links to other stakeholders, introducing social welfare objectives, environmental concerns and commitments, values and ethical approaches that complement merely financial goals (Hillman et al., 2001). In this vein, de Villiers et al. (2011) recognized the size of board as a measure of the board's experience-based human capital, embracing background and expertise, as directors' characteristics that enable the board to access additional resources. Instrumental stakeholder theory (Jones, 1995) has been the principal theoretical foundation for explaining the effect of several CG measures on CSP. CSP engagement is multi-faceted, reflecting the diverse interests of many stakeholders (Neubaum & Zahra, 2006). In general, stakeholder theory, and the instrumental perspective in particular, assert that long-term performance is conditioned by the ability of companies to manage, maintain and improve sustainable relationships with all relevant stakeholders (Clarkson, 1995). These relationships provide firms with the resources they need to establish and retain competitive advantage (Jones, 1995).

Under the instrumental stakeholder premises, some meta-analyses have tried to investigate connections between some CG mechanisms, CSP and CFP. For example, Byron & Post (2016) analyzed the influence of firms' board diversity on CSP, and Lagasio & Cucari (2019) analyzed a sample of 24 studies and captured the effect of some CG mechanisms (e.g., board independence, board size, women directors, board ownership and CEP duality) on environmental, social and governance (ESG) disclosure. Other studies (Ortas, Álvarez, & Zubeltzu, 2017) only focus on one CG mechanisms (i.e., board independence) to capture its impact on CSP. Recently, Jain & Jamali (2016) developed a systematic multi-level review aimed at capturing which CG mechanisms have an influence on corporate social responsibility (CSR) outcomes. Individual studies, such as

that conducted by Mallin et al. (2013), find that stakeholder-oriented governance mechanisms of larger and diverse boards lead to higher corporate environmental performance (CEP), and Zattoni (2011, p. 268) states that “a board representing stakeholders’ groups that provide critical contributions has higher decision-making abilities and can achieve a cooperative bargaining agreement among all constituents”. By including directors representing a wide range of stakeholders’ interests, organizations are highlighting their engagement with social and environmental issues, thus increasing a firm’s linkage to relevant resources (Hillman et al., 2001). In fact, Dalton et al. (1999) state that larger boards make it possible to represent more types of directors (outsider / internal, non-executive / executive, shareholders / stakeholder representatives), this increasing board diversity. This allows companies to incorporate into the decision-making process social objectives that may ultimately increase their CSP. In contrast, firms with less diversity are more likely to prioritize CFP issues over social issues. Based in the previous reasoning, the following hypothesis will be tested:

**H1:** Companies with larger boards achieve superior CSP.

## **2.1. THE MODERATING ROLE OF CORPORATE GOVERNANCE MECHANISMS**

### **2.1.1. THE EFFECT OF BOARD INDEPENDENCE.**

The relationship between CSP and the independence of a firm’s board has been the object of many empirical studies (Dunn & Sainy, 2009; Jo & Harjoto, 2012; Macaulay, Richard, Peng, & Hasenhuttl, 2018; Ntim & Soobaroyen, 2013) even from a meta-analytic perspective (Ortas, Álvarez, & Zubeltzu, 2017). Most of these papers reveal that board independence improves the range of strategic key business policies that respond to the needs of their stakeholders (Milliken & Martins, 1996), giving companies the ability to strengthen their connections with their stakeholders (Daily, Dalton, & Cannella, 2003; Hermalin & Weisbach, 2003; Van den Berghe, Lutgart AA & Levrau, 2004) and increase corporate social outcomes (Freeman & Evan, 1990).

Dalton et al. (1999) found that the combination of larger boards and independence can enhance CSP even more. According to stakeholder theory, companies with larger boards and greater participation of independent directors are more likely to take into account sensitivities and interests other than those of managers and the majority of shareholders (Ayuso & Argandoña, 2009). Furthermore, increased board independence is expected to positively moderate the relationship between board size and CSP. This is because larger boards with more independent directors better represent the “social contract” of the company. Based on the previous reasoning, the following hypothesis will be tested:

**H2:** The positive influence of the size of firms' boards on CSP is more positive and stronger in companies with more independent boards.

### 2.1.2. THE ROLE OF CORPORATE GOVERNANCE SYSTEMS

Aguilera and Jackson (2003) found that CG practices differ across countries, and that their dispersion is not homogenous mainly due to a divergent evolution of financial systems (Owen, Kirchmaier, & Grant, 2006; Weimer & Pape, 1999). Previous research indicates a connection between countries' systems of governance and firms' CG approaches (Ball et al., 2000). For example, Haake (2002) states that companies in codified law countries have greater shareholder concentration, and give greater representation and orientation to the interests of their stakeholders (Kock & Min, 2016). On the other hand, companies operating in common law or individualistic countries (Haake, 2002) have a greater dispersion of shareholders (La Porta et al., 1999; Owen et al., 2006) and face stronger conflicts of interest between managers and shareholders. Companies in common law countries have traditionally been considered to have a strong orientation to protect the interests of their shareholders. In those countries, rules and legal protection mechanisms facilitate the presence of shareholders on the board of directors, fulfilling the functions of control over managers. Thus, increasing the size of the board does not mean increasing the diversity of the board as it does in firms in civil law systems. Based on the previous reasoning, the following hypothesis will be tested:

**H3:** The positive influence of the size of firms' boards on CSP is more positive and stronger in companies operating in civil law countries.

The governance system of a given country contributes to strengthen/weaken the available mechanisms to protect the interests of investors. Given that those concepts are closely linked, this paper will conduct additional analyses to ascertain how national governance systems moderate the relationship between size of firms' boards and CSP. To that end, the empirical analysis will consider shareholder protection mechanisms as an additional moderator variable.

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## 3. METHOD AND SAMPLE FEATURES

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### 3.1 SAMPLE

The sample was selected using the following method. Firstly, some of the most important scientific databases (e.g., Web of science, Proquest, EBSCO and Emerald electronic) were investigated with different combinations of keywords such as: sustainability, social, social performance, corporate social performance with board size and board diversity for the period between 1997 and 2018. Secondly, the main journals that publish articles on the variables analyzed were examined (e.g., Business Strategy and Environment; Corporate Governance: An International Review; Corporate Social

Responsibility and Environmental Management; Journal of Business Ethics; Strategic Management Journal; Sustainability Accounting, Management and Policy Journal). This process resulted in 180 studies. In a third step, the database was cleaned in the following way: i) those works that did not analyze the relationship between firms' board size and CSP were removed (23 papers); ii) those works that did not consider CSP were removed (47 papers); iii) those papers that did not report correlation coefficients between the studied variables, or sufficient statistical data for conversion, were removed from the sample (30 articles). As a result, the final dataset comprises 80 papers that were published between 1997 and 2018. These studies were coded in order to conduct the meta-analysis (see Table A.1. for further details).

### **3.2. ECONOMETRIC APPROACH**

This paper uses a meta-analytic approach, which has been conceptualized as a methodological approach for the integration of prior empirical research on the same subject, for the purpose of creating generalizations based on the application of statistical methods (Botella-Ausina & Sánchez-Meca, 2015; Cooper, Hedges, & Valentine, 2009; Lipsey & Wilson, 2001). Unlike the primary studies, in a meta-analysis the input data are the results of the studies, conveniently transformed into a common metric, called effect size, that allows their integration, numerical comparison and analysis (Lipsey & Wilson, 2001). In our study, the effect size measures the magnitude of the association between size of a firm's board and CSP. For papers that reported more than one effect size – correlation coefficients in our case – between boards size and CSP, the average correlation was computed following the approach adopted by Hunter and Schmidt (Rhoades, Rechner, & Sundaramurthy, 2000; Schmidt & Hunter, 2014). This results in a single correlation coefficient per study, to meet the independence condition.

The Hedges and Olkin technique (HOMA) was implemented. Specifically, the random effects model was constructed to test the three working hypotheses. This model has been selected for the following reasons: i) we evaluate discrete variables; ii) there are moderators that are expected to have an influence in the relationship between the size of a firm's board and CSP; and, iii) the studies in the sample are not homogeneous (i.e., there are different subgroups in which the population effect size diverges). This model allows us to make some inferences outside the sample (Lipsey & Wilson, 2001). The statistical significance of the different moderating variables is tested following the approach described in Borenstein et al. (2009) and Lipsey and Wilson (2001). Specifically, different Z-tests were computed to evaluate if the different subgroups' effect sizes are statistically different (Busch & Friede, 2018; O'Boyle, Pollack, & Rutherford, 2012).

This paper also conducts supplementary analyses to confirm the results provided to test the last working hypothesis (i.e., **H3**). Specifically, a measure of countries' mechanisms to protect investors' interests was considered. We included the strength of

shareholder protection index (SSPI) as a proxy for the aforementioned variable. This is a continuous variable and thus a different econometric approach must be implemented. Accordingly, a meta-regression (MARA) was estimated (Borenstein et al., 2009; Essen, Carney, Gedajlovic, & Heugens, 2015; Lipsey & Wilson, 2001). As with the discrete variables, a random effects model was estimated through maximum likelihood. Under this approach, each study-level effect size is weighted by the inverse of its variance (Aguinis, Gottfredson, & Wright, 2011; Borenstein et al., 2009).

### **3.3. MEASUREMENT OF VARIABLES**

Measures of dependent, independent and moderating variables was selected according to previous research evidence. For example, the main independent variable (i.e., firms' board size) is defined as "the total number of directors on the proxy statement date" (Larmou & Vafeas, 2010). Although there is controversy about how to measure CSP (i.e., the dependent variable in this paper), Orlitzky identified four main proxies: i) CSP reputation ratings; ii) CSP disclosures; iii) managerial CSP principles and values, and; iv) social audits, CSP processes, and observable outcomes. A look at the papers in the dataset reveals that CSP has been measured on the basis of objective and non-objective data and criteria (Dixon-Fowler et al., 2013), such as: i) pollution indicators (e.g., toxic release inventory–TRI); ii) social audits made by independent organizations (e.g., KLD, ASSET4, Bloomberg, Jantzi and HEXUN); and, iii) the extent of firms' social reporting. Following Dixon-Fowler et al. (2013), Sharfman (1996) and Sharma (2001) we considered CSP measures along two dimensions of social performance separately: i) self-report CSP measures; and, ii) CSP externally reported or archival data. 38 of the 80 papers (47.5%) use self-reported CSP measures and the other 42 use externally-reported data (52.5%). In line with this classification, we conducted additional analyses to test whether the use of different CSP measures acts as a methodological moderator in the relationship between board size and CSP. Similar analyses have been developed previously by other studies focused on related areas (see Albertini, 2013; Busch & Friede, 2018; Byron & Post, 2016; Dixon-Fowler, Slater, Johnson, Ellstrand, & Romi, 2013; Orlitzky, Schmidt, & Rynes, 2003; Ortas, Álvarez, & Zubeltzu, 2017).

Following Siddiqui (2015) and Ortas, Álvarez, & Zubeltzu (2017), countries governance systems have been measured in the empirical study by creating a discrete variable that takes the following values: i) 1 for those papers analyzing firms exclusively from civil law countries; ii) 2 for those papers discussing companies exclusively from common law countries; iii) 3 for those papers examining firms from mixed law countries; and; iv) 4 otherwise (i.e., companies from different governance systems).

Previous research acknowledges the fact that there is no a consensus about what firms' board independence means (Brennan & McDermott, 2004). However, many authors used the wording "outside directors" to identify those directors who are

independent from management (Ajinkya et al., 2005). We partially follow this approach and define board independence as the percentage of outside directors as a proportion of the whole board. We created a discrete variable that takes the value of 1 for those papers which describe companies with an above average level of board independence and the value of 2 otherwise.

The intensity of countries' commitment to protect shareholders' interests has been measured by the SSPI index, provided by the World Bank (2015). This index reflects the effort of different countries to defend the interests of the shareholders from the firm's managers (i.e., the level measures to protect shareholders from conflicts of interests). The papers in the sample have been coded according to the values assigned to each country on the SSPI.

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## 4. RESULTS AND DISCUSSION

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### 4.1. HYPOTHESES TESTING

Table 1 shows the results that test the working hypotheses. First, the main direct effect is positive ( $\beta = 0.22$ ) and significant because its confidence interval [0.186, 0.254] does not include the value of zero. The positive effect of boards' size on CSP is consistent with instrumental stakeholder theory, since larger and more diverse boards are more likely to represent the aims, interests, and wishes of a company's stakeholders, facilitating and promoting the adoption of proactive environmental and social strategies, which has a direct and positive effect on CSP. This result is line with previous research that found a positive association between the two constructs (de Villiers et al. 2011; Jizi, 2017; Jamali et al., 2008; Lagasio & Cucari, 2019; Pucheta-Martínez & Gallego-Álvarez, 2019). The robustness of this finding was evaluated using the statistics Q-test and  $I^2$ . Both statistics reveal that the positive and significant observed direct effect is highly heterogeneous and that the variability of the results is due to the existence of moderating variables. The value of the Rosenthal fail-safe is 53.360, which indicates that the number of unpublished papers required to make the observed effect size negligible is very large and the presence of any publication bias is unlikely. These results provide support for **H1**, that firms with larger boards exhibit higher levels of CSP.

Table 1 also contains the required estimates to test the hypothesized moderating effects. **H2** predicted that the positive influence of firms' board size on CSP is more positive and stronger in companies with higher levels of boardroom independence. The results show a positive and significant effect size related with the influence of larger and more independent boards on CSP ( $\beta = 0.24$ ,  $p < 0.01$ ). Although the estimate related with firms' boards with lower levels of independence is positive ( $\beta = 0.154$ ,  $p < 0.01$ ), the z-test ( $z = 1.87$ ;  $p < 0.1$ ) reveals that the positive effect of board size on CSP is greater in companies with higher levels of independence. Accordingly, **H2** cannot be rejected.



These findings are consistent with prior research indicating that CSP is higher in firms that have larger boards and a larger representation of independent directors (Burke, Hoitash, & Hoitash, 2019; de Villiers et al., 2011; Lagasio & Cucari, 2019). These findings are also in line with the premises established by instrumental stakeholder theory, which predict that larger and more independent boards are more likely to include stakeholders' interests in corporate management and thus be more sensitive to social issues, resulting in increased CSP (Aguilera & Desender, 2012; Rediker & Seth, 1995).

**Table 1: Meta-analysis results**

	N	K	$\bar{r}$	z	-95% IC	+95%IC	Q-test	I <sup>2</sup>	Z-test	p-value
<b>Direct effect</b>										
Board size's impact on CSP	80,912	80	0.220***	12.12	0.186	0.254	1,808.99	95.63		
<b>Moderating effects</b>										
<u>Corporate governance systems</u>										
Civil Law	9,823	16	0.321***	7.9	0.303	0.339	218.10	93.13	Reference category	
Common law	52,657	41	0.208***	7.06	0.199	0.216	1,162.42	96.56	11.33	0.000***
Global studies	12,145	10	0.231**	3.08	0.214	0.247	40.01	77.51	7.22	0.000***
Mixed law	6,287	13	0.271***	5.81	0.240	0.294	251.80	95.23	3.37	0.001***
<u>Board Composition</u>										
Boards with low independence	16,764	24	0.1538***	4.43	0.086	0.220	498.49		Reference category	
Boards with high independence	45,164	26	0.2402***	7.63	0.180	0.298	746.63		1.87	0.061*
<u>CSP measurement approach</u>										
Self-reported	18,899	39	0.258***	9.82	0.208	0.307	516.25	92.6	Reference category	
Externally-reported	222,613	41	0.186***	7.42	0.137	0.233	1,228.07	96.7	2.05	0.041**

This table provides the results of the meta-analytic study. N refers to the total sample size (number of companies); K is the number of effect sizes (that were variance weighted);  $\bar{r}$  shows the mean effect size. -95% CI and +95% CI are the limits of the mean size effect confidence intervals; Q-stat is the homogeneity test; and finally, I<sup>2</sup>-stat shows the ratio of the study variance due to heterogeneity; Z-test capture differences between subgroups. \*, \*\* and \*\*\* represent statistical significance at the 10%, 5% and 1% levels respectively.

**H3** states that the positive influence of a larger board on CSP will be stronger in those companies in codified law systems. The results show that the estimated effect size associated with companies operating in civil law countries is positive and significant ( $\bar{r}=0.321$ ,  $p < 0.01$ ). Furthermore, this effect size is greater than that for companies in other governance systems (i.e.,  $\bar{r}=0.208$ ,  $p < 0.01$  for common law countries,  $\bar{r}=0.231$ ,  $p < 0.05$  for global systems and  $\bar{r}=0.271$ ,  $p < 0.01$  for mixed law systems). Although these differences do not guarantee statistical differences between companies in different legal systems, the z-tests suggest that these observed differences are significant. These results indicate that the positive influence of board size on CSP is greater in companies operating in civil law countries, which in general show a strong orientation towards stakeholders.

Finally, we test for the possible existence of a methodological moderator, which is related with the different ways of measuring the CSP construct. The results show that the positive effect of board size on CSP is greater when it is measured through self-reported data ( $\bar{r}=0.258$ ,  $p<0.01$ ). This estimate is also positive when CSP is measured through externally-reported proxies ( $\bar{r}=0.186$ ,  $p<0.01$ ). However, the z-test indicates that using self-report CSP measures strengthen the relationship between size of firms' boards and CSP ( $z = 2.05$ ;  $p < 0.05$ ).

For robustness purposes, the models were re-estimated through the Schmidt and Hunter (2014) random effects approach meta-analysis using the macros provided by David Wilson (Lipsey & Wilson, 2001). The results obtained were not significantly different than those provided in this section. They have been omitted for brevity purposes but they are available upon request from the corresponding author.

## 4.2. SUPPLEMENTARY ANALYSIS

As in other CG meta-analysis (see Byron and Post, 2016), we conducted supplementary analyses to establish more firmly the moderating effect of GC systems. In fact, these are closely related with countries' commitment to protect investors' interests. Thus, we included in the SSPI variable and estimated the meta-regression (MARA). The estimates are shown in Table 2.

**Table 2.** Meta-regression results

<b>Overall size effect</b>	
Intercept	0.4923*** (0.1161)
<b>Moderator</b>	
Shareholders' protection mechanisms	-0.0376*** (0.0154)
<b>Model additional data</b>	
K	69
I <sup>2</sup>	94.74%
R <sup>2</sup>	0.09
Q	1489.19 [0.00]
Q model (p)	214.77 [0.00]
Q residual (p)	1274.42 [0.00]

This table shows the estimates of the meta-regression analysis. This model only considers a sample of 61 articles because the rest ones comprised companies from different countries, thus exhibiting divergent SSPI values. Unstandardized regression coefficients are reported. Standard errors are in parentheses and p-values are in brackets. K refers to the total number of effect sizes; Q refers to the homogeneity statistic. \*, \*\*, \*\*\* Significant at the 10%, 5% and 15 level respectively.

The main size effect is positive and significant, thus confirming that the larger the firm's board, the greater their CSP. As predicted by **H3**, the MARA results show that the effect of board size on CSP is weaker for companies in countries with stronger shareholder protection mechanisms, a common profile of common law countries. This

is because the regression coefficient is negative and significant ( $\beta = -0.0376; p < 0.05$ ). Thus, strong investor protection mechanisms do not favor the incorporation of different stakeholders' interests on firms' boards by preventing stakeholders-directors from performing their functions efficiently. Accordingly, these findings suggest that companies in countries with stronger mechanisms to protect shareholders' interests have a shareholder orientation rather than a stakeholder orientation. This result confirms the findings of the HOMA model presented in the previous section.

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## 5. CONCLUDING REMARKS

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The existing literature has extensively analyzed the effect of the size of firms' boards on CSP without achieving a consensus. This paper address this connection and provides a meta-analysis in order to summarize previous research on the topic. Our central results show a positive effect of board size on CSP. However, this positive connection is of different magnitude when CSP is measured through self- and externally-related proxies. The positive effect is stronger when CSP is measured through self-related proxies. This can be explained because higher self-reported CSP scores can be a result of managerial misconduct. Thus, this results must be interpreted with some caution because self-reported CSP scores may include a social desirability bias (Podsakoff & Organ, 1986). This paper also finds that the positive effect of board size on CSP is more positive and stronger when firms exhibit higher levels of board independence. The results suggest that different CG mechanisms are mutually dependent and complementary. These findings are consistent with stakeholder theory, which predicts a positive association between those constructs because larger boards represent in a better way the diversity and the involvement of a firm's stakeholder interests (Dalton et al., 1999; de Villiers et al., 2011; Tauringana & Chithambo, 2015). Accordingly, independent and larger boards are more likely to have wider connections with strategic stakeholders, achieving more positive social outcomes (de Villiers, 2011, Hillman et al. (2001). The paper also finds that the positive effect of board size on CSP is greater in civil law countries. This is mainly explained because codified law countries have a stakeholder orientation, rather than prioritizing shareholders' claims, as is the case in common law countries. Companies in civil law countries are more likely to adopt a stakeholder management approach.

These findings raise an important issue for extending previous research on the effect of CG measures on CSP. They are also important for regulators, company managers, shareholders and stakeholders concerned with the implications for CSP of board related internal CG mechanisms. These findings are of special importance for corporate strategy. The results suggest that a firm's strategic considerations are consistent with a stakeholder-based view of the firm, according to which directors' interconnections (independent or outside directors) and organizational diversity (board size) create competitive social advantage. Inclusion of financial and non-financial outcomes requires leadership and support from the board. The consideration of CSP as

a complementary corporate outcome makes it necessary to refocus board characteristics, so the size and independence of the board has a positive effect on CSP. Finally, this work complements previous studies from the bundle of CG approach, and provides guidance for regulators, stakeholders and managers, suggesting larger boards with more independent and diverse board members to meet the triple bottom-line objectives.

This paper is not free from limitations. The results presented are subject to common biases shown by the meta-analytical studies (Murphy, 2017; Walker, Hernandez, & Kattan, 2008). This approach cannot detect endogeneity, since few articles in the sample controlled for this bias (Samaha, Khlif, & Hussainey, 2015), and the number of studies in some sub-groups is small. Future studies should consider other variables of moderation and mediation between board size and CSP such as: i) gender diversity; ii) ownership concentration; and, iii) institutional participation.

## Appendix

**Table A.1:** Articles characterization.

Authors	Journal	Sample size	Observed r <sup>a</sup>	Corr. reported	Countries	CG System <sup>a</sup>	CSP measure <sup>b</sup>
Alazzani, Hassanein, & Aljanadi, 2017	The International Journal of Business in Society	303	0.17 to 0.32	2	Malaysia	M	S-r
Amran, Lee, & Devi, 2014	Business Strategy and the Environment	113	0.064	1	Global	G	S-r
Amran, Periasamy, & Zulkafli, 2014	Sustainable Development	111	0.15388	1t	Global	G	S-r
Arayssi, Dah & Jizi., 2016	Sustainability Accounting, Management and Policy Journal	975	-0.2939	1	UK	Co	E-r
Arena, Bozzolan, & Michelon, 2015	Corporate Social Responsibility and Environmental Management	288	0.143 to 0.32	2	US	Co	E-r
Bai, 2013	Journal of Business Ethics	1939	-0.07 to 0.13	2	US	Co	E-r
Barakat, Pérez, & Ariza, 2015	Review of Managerial Science	101	0.42	1	Palestine/Jordan	Ci	S-r
Ben-Amar, Chang, & McIlkenny, 2015	Journal of Business Ethics	541	0.1	1	Canada	Co	S-r
Benomran, Haat, Hashim, & Mohamad, 2015	Journal of Environment and Ecology	162	-0.03	1	Libya	M	S-r
Bernardi & Threadgill, 2011	Electronic J. of Bus. Ethics & Organization Studies	429	0.23	1	US	Co	S-r
Bernardi, Bosco, & Columb, 2009	Corporate Reputation Review	500	0.113	1	US	Co	E-r
Brammer, Millington, & Pavelin, 2009	British Journal of Management	199	0.245	1	UK	Co	E-r
Burke, Hoitash & Hoitash, 2019	Journal of Business Ethics	11458	0.23 to 0.37	3	US	Co	E-r
Cho, Jung, Kwak, Lee, & Yoo, 2015	Journal of Business Ethics	10297	0.106	1t	US	Co	E-r
Choi, Lee, & Park, 2013	Corporate Governance: An International Review	2042	0.31	1	Korea	Ci	E-r
Cormier, Ledoux, & Magnan, 2011	Management Decision	137	0.22 to 0.3	2	Canada	Co	S-r
Cuadrado-Ballesteros et al., 2015	Spanish Accounting Review	5380	0.2295	1	Global	G	E-r
de Villiers Naiker & van Staden, 2011	Journal of Management	5997	0.16	1	US	Co	E-r
Deschênes, Rojas, Boubacar, Prud'homme, & Ouedraogo, 2015	Corporate Governance: The International Journal	192	0.097	1t	Canada	Co	E-r
Dienes & Velte, 2016	Sustainability	34	0.241	1	Germany	Ci	E-r
Esa & Anum Mohd Ghazali, 2012	Corporate Governance: The international journal	54	0.333 to 0.596	2	Malaysia	M	S-r
Frias-Aceituno, Rodriguez-Ariza, & Garcia-Sanchez, 2013	Corporate Social Responsibility and Environmental Management	1575	0.166	1	Global	G	S-r
Fuentes-Medina, Marrero, & Martel, 2018	Inter. Journal of Management & Social Studies	49	0.19	1	Spain	Ci	E-r
Galbreath, 2011	Journal of Management and Organization	161	0.13 to 0.27	2	Australia	Co	S-r
Galbreath, 2018	Business & Society	300	0.41	1	Australia	Co	E-r
Garcia-Sanchez, Cuadrado-Ballesteros, & Sepulveda, 2014	Management Decision	686	0.4893	1	Spain	Ci	S-r
Godos-Díez, Cabeza-García, Alonso-Martínez, & Fernández-Gago, 2016	Review of Managerial Science	398	0.483	1	Spain	Ci	S-r
Gupta, Lam, Sami, & Zhou, 2015	Working Paper, Social Science Research Network	1153	-0.05 to 0.35	2	US	Co	E-r
Hafsi & Turgut, 2013	Journal of Business Ethics	95	0.12	1	US	Co	E-r
Haldar & Mishra, 2015	Information Management and Business Review	24	0.267	1	India	Co	S-r
Halme & Huse, 1997	Scandinavian Journal of Management	140	0.14 to 0.16	2	European union	Ci	S-r
Haque, 2017	The British Accounting Review	2315	0.34	1	UK	Co	S-r
Hillman, Keim & Luce, 2001	Business and Society	247	0.128	1	US	Co	E-r
Hogan, Olson, & Sharma, 2014	Journal of Leadership, Accountability and Ethics	540	0.06 to 0.07	2	US	Co	E-r
Htay, Ab Rashid, Adnan, & Meera, 2012	Asian Journal of Finance & Accounting	120	-0.1	1	Malaysia	M	S-r

Huse, Nielsen, & Hagen, 2009	Journal of Business Ethics	371	0.22	1	Norway	Ci	S-r
Hussain, Rigoni, & Orij, 2016	Journal of Business Ethics	152	-0.1044 to -0.18	2	US	Co	S-r
Ienciu, Popa, & Ienciu, 2012	Procedia Economics and Finance	54	0.09	1	Global	G	E-r
Jangu, Darus, Zain, & Sawani, 2014	Procedia Social and Behavioral Sciences	100	0.377	1	Malaysia	M	S-r
Javaid Lone, Ali & Khan, 2016	Corporate Governance: The International Journal	250	0.67	1	Pakistan	M	S-r
Jia & Zhang, 2011	The International Journal of Human Resource	1320	0.1 to 0.14	2	China	M	S-r
M. Jizi, 2017	Business Strategy and the Environment	1155	0.0682	1t	UK	Co	E-r
M. I. Jizi, Salama, Dixon, & Stratling, 2014	Journal of Business Ethics	291	0.282317647	1t	US	Co	S-r
Karlsson & Bäckström, 2015	Master's Thesis Uppsala University	1015	0.52	1	Sweden	Ci	S-r
Kiliç, Kuzey, & Uyar, 2015	Corporate Governance	3106	0.227	1	Turkey	Ci	S-r
Kimball, Palmer, & Marquis, 2012	Academy of Management Proceedings, SSRN	657	0.18	1	US	Co	E-r
Liao, Luo, & Tang, 2015	The British Accounting Review	329	0.42	1	China	M	E-r
Lim, Matolcsy, & Chow, 2007	European Accounting Review	181	0.247	1	UK	Co	E-r
W. Lu, 2016	Doctoral Dissertation University of Texas	2098	0.1243	1	Australia	Co	S-r
Y. Lu, Abeysekera, & Cortese, 2015	Pacific Accounting Review	83	0.244	1	US	Co	E-r
Macaulay et al., 2018	Journal of Business Ethics	577	0.29	1	US	Co	E-r
Mallin & Michelon., 2013	Accounting and Business Research	221	-0.1022 to 0.1960	6	US	Co	E-r
Marquis & Lee, 2013	Strategic Management Journal	2100	0.253	1	US	Co	E-r
Martínez-Ferrero, Vaquero-Cacho, Cuadrado-Ballesteros, & García-Sánchez, 2015	Investigaciones Europeas de Dirección y Economía de la Empresa	877	0.2371	1	Global	G	E-r
McGuinness, Vieito & Wang., 2017	Journal of Corporate Finance	2412	0.29	1	China	M	E-r
Michelon & Parbonetti, 2012	Journal of Management & Governance	114	0.217 to 0.233	3	Global	G	S-r
Musteen, Datta, & Kemmerer, 2010	British Journal of Management	324	0.2	1	US	Co	E-r
Ntim & Soobaroyen, 2013	Corporate Governance: An International Review	600	0.12	1	South-Africa	M	S-r
Oh, Chang & Cheng., 2016	Journal of Business Ethics	1332	0.41	1	US	Co	E-r
Orozco, Vargas, & Galindo-Dorado, 2018	European J. of Manag. and Business Economics	84	0.039	1	Colombia	Ci	E-r
Ortiz-de-Mandojana, Aguilera, & Morales-Raya, 2016	Business Strategy and the Environment	210	-0.08	1	US	Co	E-r
Post, Rahman & Rubow, 2011	Business & Society	78	0.00 to 0.23	3	US	Co	S-r
Lorenzo, Sánchez, & Gallego-Álvarez, 2009	Revista Española de Financiación y Contabilidad	288	0.621	1	Spain	Ci	S-r
Prado-Lorenzo & Garcia-Sanchez, 2010	Journal of Business Ethics	283	0.06125	1	Global	G	E-r
Rao, Tilt and Leste., 2012	Corporate Governance: The international journal	96	0.16 to 0.36	2	Australia	Co	S-r
Rao & Tilt, 2016	Meditari Accountancy Research	345	0.063132	1t	Australia	Co	S-r
Rodríguez-Ariza, Aceituno, & Rubio, 2014	Spanish Accounting Review	3521	0.288	1	Global	G	S-r
Sahin, Basfirinci, & Ozsalih, 2011	African Journal of Business Management	96	0.074	1	Turkey	Ci	S-r
Said, Hj Zainuddin, & Haron, 2009	Social Responsibility Journal	150	0.232	1	Malaysia	M	S-r
Said, Omar, & Nailah Abdullah, 2013	Social Responsibility Journal	120	0.037	1	Malaysia	M	S-r
Siciliano, 1996	Journal of Business Ethics	240	0.1726	1	US	Co	S-r
Veronica Siregar & Bachtiar, 2010	International Journal of Islamic and Middle Eastern Finance and Management	87	0.422049	1t	Indonesia	Ci	S-r
Tauringana & Chithambo, 2015	The British Accounting Review	860	0.39	1	UK	Co	S-r
Velte, Jones, & Jones, 2016	Journal of Global Responsibility	1019	0.24	1	Austria/ Germany	Ci	E-r
Walls & Hoffman, 2013	Journal of Political Economy	1881	0.18	1	US	Co	E-r

Walls, Berrone, & Phan, 2012	Strategic Management Journal	2002	0.18	1	US	Co	E-r
Wieland & Flavel, 2015	Journal of Management & Governance	294	0.108 to 0.201	4	Germany	Ci	E-r
Yuanhui Li, Li, Zhang, & Foo, 2013	Chinese Management Studies	613	0.43 to 0.6	4	China	M	E-r

This table shows the main data obtained when coding the considered studies included in the meta-analysis. <sup>a</sup> governance system identification: i) Co refers to common law; ii) Ci refers to civil law; iii) M refers to Mixed-law; and, iv) G refers to multi-legal system samples. <sup>b</sup> CSP measurement approaches: i) E-r refers to external-reported CSP measure; and, ii) S-r refers to self-reported CSP proxies.

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