EXPLORING IN EMERGING COUNTRIES CORPORATE SOCIAL REPONSIBILITY REPORTING AND CORPORATE GOVERNANCE MECHANISMS

Isabel Gallego-Álvarez
Associate Professor
University of Salamanca
Multidisciplinary Institute for Enterprise (IME)
Department of Business Administration
Campus Miguel de Unamuno, Edificio FES
37007-Salamanca
Spain
e-mail: igallego@usal.es

María Consuelo Pucheta-Martínez
Associate Professor
Universidad Jaume I
Departamento de Finanzas y Contabilidad
Campus del Riu Sec, s/n
12071-Castellón
Spain
Phone: 0034 964 38 7141
e-mail: pucheta@uji.es

Corresponding author: María Consuelo Pucheta-Martínez

ACKNOWLEDGEMENTS
The authors acknowledge financial support from the Spanish Ministry of Economy, Industry and Competitiveness for the research project ECO 2017-82259-R and from the University Jaume I for the research project UJI-B2018-15.

EXPLORING IN EMERGING COUNTRIES CORPORATE SOCIAL REPONSIBILITY REPORTING AND CORPORATE GOVERNANCE MECHANISMS

ABSTRACT

Within corporate governance, the board of directors plays a major role in improving corporate transparency by increasing the disclosure of CSR information. In this paper, we analyse the effect of board composition, particularly board independence, board gender diversity, CEO duality and the presence of a CSR board committee, on CSR reporting. Evidence of this effect is still scarce when it concerns the effect of corporate governance mechanisms and CSR disclosure in firms pertaining to emerging market economies, and for this reason, our study focuses on this type of country. Our sample comprises 934 international firm-year observations from the following 10 countries with emerging markets: Brazil, Chile, China, Czech Republic, Egypt, India, Mexico, Russia, South Africa and Thailand for the period 2004–2015. This classification of countries with emerging markets is based on the Morgan Stanley Capital International (MSCI) Emerging Markets Index, also used by Paramati et al. (2017). Drawing on agency and stakeholder approaches, we posit four hypotheses: board independence and CSR board committees positively affect CSR disclosure, whereas board gender diversity and CEO duality have a negative effect. The results obtained reveal that in emerging market economies, the presence of women on boards of directors is quite limited and, therefore, their participation in decision-making is minimal. Furthermore, CEO duality discourages the disclosure of CSR information, which may be justified for the family orientation of most firms in these countries, where the CEO is usually also the chairperson of the board.

Key words: Board of directors, board independence, board gender diversity, CEO duality, CSR board committee, CSR reporting, emerging market economies.

EXPLORING IN EMERGING COUNTRIES CORPORATE SOCIAL REPONSIBILITY REPORTING AND CORPORATE GOVERNANCE MECHANISMS

1. Introduction

Corporate governance (CG) is highly relevant and plays an important role in the adoption of ethical corporate practices throughout the entire organisational structure of companies and in relations with employees, customers, creditors, shareholders and regulators. In addition, it facilitates administration and legal compliance and prevents illegal and improper behaviour (Al-Malkawi, Rafferty, & Pillai, 2014).

Within corporate governance, the board of directors figures strongly in improving firm transparency by increasing the disclosure of CSR information. In this regard, Jamali, Safieddine, and Rabbath (2008) support the idea that the board of directors is a key element in business decision-making with respect to CSR disclosure. Board composition is a key attribute for defending shareholders' interests, but it is also assumed that efficient boards will satisfy and attend to all stakeholders' needs (Guest, 2009).

There is an important stream of research focused on exploring corporate governance and CSR disclosure; however, we find scant empirical evidence with regard to the association between CSR reporting and corporate governance mechanisms such as boards and, specifically, their composition (e.g., Chan, Watson, & Woodliff, 2014; Jain & Jamali, 2016). The evidence for this effect is even scarcer in the research analysing the effect of corporate governance mechanisms on CSR disclosure in firms belonging to emerging market economies (Claessens & Yurtoglu, 2013), although this is not the case in certain other lines of research, such as those relating to corporate governance and firm value internationally (Ammann, Oesch, & Schmid, 2011), which have focused specifically on emerging market economies such as India or Turkey (e.g., Balasubramanian, Black, & Khanna, 2010).

The objective of our study, therefore, is to focus on emerging markets, since authors such as Bebchuk and Hamdani (2009) consider that this type of market may manifest corporate governance characteristics that are different from those of developed markets. More specifically, we focus on how the structure of the board of directors, particularly board independence, board gender diversity, CEO duality and the presence of a CSR board committee, impact CSR disclosure in a sample of international firms operating in emerging market economies.

Why do we focus on these four corporate governance mechanisms? Firstly, past research based on developed countries shows that board independence affects CSR reporting positively or negatively. The negative effect of independent directors on CSR disclosure in developed countries may be explained by the fact that in some of these countries there are large and dominant shareholders represented on boards that may take control over independent directors and hinder their efficiency. In other developed countries, board independence might be positively associated with CSR reporting because the presence of significant shareholders on boards is scarce and independent directors may behave in a more independent and effective way. In emerging market economies, most evidence reports a positive relationship between independent directors and the disclosure of CSR information, which may be due to the low representation of large shareholders on boards (Jo & Harjoto, 2011), and consequently, their influence on independent directors will be lower.

Secondly, past evidence on developed countries finds that board gender diversity has a positive impact on CSR reporting. According to Kim (2013), the female leadership style may encourage CSR disclosure since women directors are more sensitive and cooperative than men directors and, therefore, will show a positive attitude towards environmental and social issues. In contrast, in emerging market economies, the presence of female directors on boards is low, and as a result, its influence on the decision-making process regarding CSR reporting has not clearly been found by prior literature. Hence, this explains why gender diversity in developing countries merits our attention.

Thirdly, when the power is highly concentrated in one person serving simultaneously as CEO and chairperson of the board, he/she might be tempted to withhold relevant information from shareholders and stakeholders and may limit the execution of certain governance roles, such as CSR disclosure. In this regard, Giannarakis (2014) shows a negative effect of CEO duality on CSR reporting in developed countries. In emerging market economies, authors like Michelon and Parbonetti (2012) and Khan, Muttakin, and Siddiqui (2013) demonstrate no association between CEO duality and CSR disclosure, which may be because the CEO and the chairperson of the board in these countries are often members of the same family, and therefore CEO duality as a corporate governance mechanism becomes a mere ritual.

Finally, research conducted in emerging and developed countries finds a positive relationship between CSR committees and CSR disclosure, but we are aiming to shed new light on whether such an association is also provided by our sample of emerging market economies.

Empirical evidence shows that board structure (board independence, board gender diversity, CEO duality and the presence of a CSR board committee) performs a relevant role regarding the disclosure of CSR information, because as boards of directors attain a clearer understanding of the benefits of greater disclosure (Aras & Crowther, 2008), CSR reporting will be improved.

From our results it can be deduced that certain corporate governance mechanisms do indeed affect CSR disclosure. Our findings show that board independence and the presence of a CSR board committee have a positive effect on CSR disclosure, whereas board gender diversity and CEO duality have a negative effect on CSR disclosure. With results such as these, this study contributes to the previous literature on corporate governance mechanisms and CSR disclosure in emerging market economies in several ways. Firstly, our evidence shows that not all corporate governance mechanisms of firms domiciled in countries with emerging market economies are effective in improving CSR disclosure. In these countries, board independence and CSR committees can be said to be relevant corporate governance mechanisms that enhance the reporting of CSR matters, while board gender diversity and CEO duality remain inefficient as corporate governance tools since they negatively impact CSR disclosure. Secondly, we show that board composition, especially with certain characteristics, can be an important corporate governance mechanism that drives firms to become involved with their shareholders and all stakeholders in order to improve the transparency of organisations by increasing CSR reporting. Finally, the results obtained show that female directors on boards do not engage with social and environmental matters, because their presence on boards is negatively associated with the reporting of CSR information. This may be due to the scant presence of women currently on the boards of the firms in our sample, which pertain to emerging market economies. This finding is supported by Singh and Verma (2014), who show that in countries such as Kenya and India there is still great inequality in the attribution of roles to men and women, with predominantly male values and large gender differences. The negative effect of CEO duality on CSR disclosure is in line with Giannarakis (2014) and Sundarasen et al. (2016), who support the view that the effectiveness of the monitoring role of board directors is constrained by the managerial power of CEO duality by resulting in a lower transparency towards stakeholders reducing CSR reporting. This study can help us understand why a set of norms that are relatively effective in developed markets may not work in emerging markets. Thus, it seems that alternative systems of corporate governance that reflect the institutional realities of these emerging markets will be needed.

This study is structured around the following sections. After the Introduction, in section 2 we posit the theoretical framework and the research hypotheses. In section 3, the methodology is presented and the sample and variables are explained. The results obtained from the research are analysed in section 4 and, finally, in section 5, we provide the conclusions and implications derived from our analysis.

2. Theoretical background and hypotheses

Among the theories attempting to explain the association between corporate governance attributes and CSR disclosure we can highlight agency theory. This theory has been used in previous studies by authors such as Jain and Jamali (2016) and Sundarasen, Je-Yen, and Rajangam (2016), among others, and in the business environment of our field of study by El Gammal, El-Kassar, and Messarra (2018), who focus on firms in the Middle East and North Africa (MENA). According to this theory, relationships between shareholders and managers trigger agency problems due to information asymmetries between them (Jensen & Meckling, 1976). Therefore, the board of directors becomes a corporate governance mechanism for shareholders to mitigate the agency costs and align the interests of management and shareholders, although the boards also take into account all the interests of the stakeholders affected by management decisions (Jain & Jamali, 2016).

In relation to CSR disclosure, Jamali et al. (2008) also show that the board of directors is a relevant tool that supports CSR matters, and Rao and Tilt (2016) consider that some board attributes can promote CSR disclosure as a way to reduce information asymmetry and, consequently, decrease agency costs. Thus, Harjoto and Jo (2011) found that firms with a higher percentage of independent directors tend to carry out more socially responsible activities, given that these directors are more aware of social and environmental demands and assume responsibility for these aspects (Ibrahim, Howard, & Angelidis, 2003). Khan et al. (2013) also find the same relationship for a sample of 116 firms belonging to the Dhaka Stock Exchange (DSE) in Bangladesh.

Besides agency theory, stakeholder theory is one of the theories most commonly used to understand the relations between corporate governance mechanisms and CSR disclosure (Huang & Kung, 2010). This theory broadens the agency perspective by arguing that the board of directors not only preserves the interests of shareholders but also the interests of all stakeholders (Freeman, 1984). From this point of view, firms have goals that go beyond value creation for their shareholders, and have social and environmental responsibilities (Kiel &

Nicholson, 2003). Firms thus carry out CSR activities to cover the varying demands from their stakeholders, ultimately helping the firms to survive.

According to Adams and McNicholas (2007), stakeholder theory suggests that the disclosure of financial, social and environmental information is part of the dialogue between a firm and its stakeholders, and it provides information on activities that legitimises its behaviour as well as educates and informs with the aim of changing perceptions and expectations (Hossain et al., 2016). In addition, by disclosing aspects of CSR, firms will achieve a better reputation and identity (Chan et al., 2014). Therefore, boards of directors, particularly their attributes, are necessary to pressure the management team to disclose CSR information. Boards thus help firms to behave in a way that satisfies the interests of all stakeholders (De Graaf & Stoelhorst, 2009).

Although these two theories have been used in previous works that analyse certain attributes of corporate governance and CSR disclosure in companies from developed countries (e.g., Michelon & Parbonetti, 2012; Jizi, Salama, Dixon, & Stratling, 2014), research studies that apply these theories to firms in emerging market economies are less known, perhaps because there are simply fewer studies in this regard. Therefore, it is considered necessary to continue in this line to see the effect that corporate governance mechanisms have on CSR disclosure in firms with these characteristics and under agency and stakeholder approaches.

2.1. Board independence

Board independence is an important corporate governance mechanism for controlling and supervising the management team and for safeguarding the interests of shareholders, particularly the interests of minority shareholders (Agrawal & Knoeber, 1996). From the perspective of agency theory, it is considered that boards with a high proportion of independent directors are more effective in the handling and control of management (Jizi et al., 2014). Therefore, the agency approach suggests that independent directors encourage transparency and have an influence on CSR disclosure (Cheng & Courtenay, 2006; Jo & Harjoto, 2011). Additionally, stakeholder theory proposes that independent directors tend to pay more attention to the interests of all stakeholders because they are more receptive to social demands and, therefore, motivate firms to participate more in sustainability (Ibrahim & Angelidis, 1995).

According to Rodríguez-Ariza, Frías-Aceituno, and García-Rubio (2014), independent directors are expected to make decisions to ensure that firms achieve their objectives and behave appropriately from an independent, external and objective point of view, which will lead to a greater quantity and quality of information disclosed. In addition, these independent members are appointed for their financial experience, professional training and reputation and are not linked to the firm (Fligstein, 1991).

Past research focused on the relationship between independent directors and CSR reporting provides mixed results. Some authors, such as Eng and Mak (2003), Gul and Leung (2004) and Huafang and Jianguo (2007), find a negative association between the two variables. On the other hand, Chapple and Ucbasaran (2007), Ho and Wong (2001) and Dias, Rodrigues, and Craig (2017) do not show any relationship between the two variables, although in most of the studies a positive and significant relationship is found. Specifically, Harjoto and Jo (2011) find that firms with a higher percentage of independent directors on their boards tend to carry out more socially responsible activities. This may be due to the fact that these types of directors are more aware of social and environmental demands and take responsibility for these aspects (Ibrahim et al., 2003). In contrast, internal members tend to be more concerned with issues related to economic benefits (Coffey & Wang, 1998) and are less concerned about publicising the social and environmental aspects of the firm.

In Bangladesh, one of the countries considered in the research, an order of the Securities and Exchange Commission (SEC, 2006) relating to corporate governance requires that at least 10% of the members of a board of directors be independent. A study conducted by the World Bank (2009) has also highlighted the need for greater independence and professionalisation on the boards of directors of firms in Bangladesh. In this regard, the positive relationship between independent directors and CSR disclosure has been highlighted in the work carried out by Khan et al. (2013), who analysed a sample of 116 firms belonging to the Dhaka Stock Exchange (DSE) in Bangladesh from 2005 to 2009. These authors argue that independent directors can pressure firms to participate in CSR disclosure in order to ensure consistency between the actions of the organisation and the values of society. These results are in line with those obtained in previous works by Petra (2005) and Jo and Harjoto (2011).

Based on these arguments, the following hypothesis is posited in relation to board independence:

H1: Ceteris paribus, there is a positive association between the proportion of independent directors on boards and CSR disclosure in emerging market economies

2.2. Board gender diversity

Another variable we will analyse is the presence of women on boards of directors, which in recent years has acquired special importance (Carrasco & Laffarga, 2007). Several authors (e.g., Gul, Srinidhi, & Ng, 2011) have argued that women play an important role in the field of business management, since they have professional values and ethical criteria that differ from those of men (Adams & Ferreira, 2009). Authors such as Ibrahim and Angelidis (1994) have shown empirically that female members of boards of directors have a more philanthropic orientation than male members.

According to agency theory, a female leadership style can encourage CSR information disclosure, and consequently, female directors can be good promoters of CSR issues. Men and women are considered different in the sense that women are more sensitive and more willing to cooperate, so it is thought that they can influence a more positive assessment of firms' social and environmental issues (Kim, 2013). Stakeholder theory also argues that society may perceive that firms address CSR issues when they include women on the board of directors, as they may encourage CSR reporting because they have a more open mind than men and are better able to take measures to make firms more environmentally and socially committed to stakeholders (Ibrahim & Angelidis, 1994; Hillman, Cannella, & Harris, 2002). The findings provided by Harjoto, Laksmana, and Lee (2015) are in line with stakeholder theory, since they show that board gender diversity increases firms' capacity to satisfy stakeholders' needs and expectations.

Considering these arguments and previous works from different authors (e.g., Melero, 2011; Rao, Tilt, & Lester, 2012; Lone, Ali, & Khan, 2016; Tamini & Sebastianelli, 2017), there seems to be a positive relationship between board gender diversity and CSR disclosure, or environmental disclosure. However, in emerging markets, CSR disclosure may have some aspects that can be differentiated with respect to the context, rules and regulations of developed economies, and this may result in this relation not always showing a positive sign. In this regard, Muttakin, Khan, and Subramaniam (2015) report a negative sign for a sample of firms in Bangladesh, outlining potential reasons for this negative relationship: (i) the lack of qualifications and educational experience of female directors in emerging market economies, and (ii) family ties of the directors that tend to protect family interests and care little about CSR.

In this regard, a study conducted by Katmon, Mohamad, Norwani, and Farooque (in press) reveals that not all dimensions of board diversity improve CSR disclosure for firms in Malaysia. The authors show that age and nationality diversity are negatively related to CSR disclosure, indicating that the presence of different ages or nationalities reduces the quality of CSR disclosure. At the same time, these authors find that education and ethnic origin are not significant when it comes to influencing the quality of CSR disclosure. By including interaction terms as variables in the model, the results show a complementary relationship between gender and educational level, as well as between gender and nationality, in influencing CSR disclosure, and the results also show a substitutive relationship between age and gender when influencing CSR disclosure. The evidence from these authors provides a useful overview of the policy on regulations regarding board diversity in Malaysia and other emerging economies in Asia. The authors suggest that policymakers should focus on gender, educational level and board diversity.

Another relevant study carried out by Amran, Lee, and Devi (2014) found an association between the proportion of women on boards and CSR disclosure for firms belonging to countries with emerging markets such as China, India, Indonesia, Korea, Malaysia and Thailand. These results can be explained by most of the firms in the sample having only one or two women on their boards, which means that men dominate in decision-making and women are a minority group that cannot influence decision-making on CSR or other topics.

Singh and Verma (2014) consider that in countries like Kenya or India there is still a great inequality in the attribution of roles between men and women, with masculine values predominating and a great gender difference. For example, India imposed a participation quota of at least one woman on boards of directors for 2015, but it continues to be one of the countries where the presence of female directors is lowest, one of the least egalitarian in the distribution of male–female roles and one of the most accepting of this distance in power. Authors such as Rao and Tilt (2016) highlight how little research has been done concerning female participation on boards of directors and how this participation influences CSR disclosure in firms of emerging market economies. Most of the previous literature in developed countries finds a positive effect of board gender diversity on CSR disclosure. Nonetheless, the scant research performed in emerging market economies reports that the presence of female directors on boards does not impact CSR disclosure. Accordingly, we posit the following hypothesis:

H2: Ceteris paribus, CSR disclosure is not affected by board gender diversity in emerging markets economies

2.3. CEO duality

CEO duality refers to a situation where the CEO also occupies the position of chairperson (control) of the board of directors, such that the duality of the CEO results in a concentration of managerial power (Rechner & Dalton, 1991; Surroca & Tribó, 2008). Agency theory suggests that the private interests of CEOs are likely to impact the degree to which they participate in CSR activities and disclosure. In this context, CEO duality can be considered an instrument of managerial power. CEOs are more likely to be appointed as chairpersons of boards of directors if they have a successful track record or if they control a large proportion of a firm's stock (Alotaibi & Hussainey, 2016).

For authors such as Jensen (1986), the concentration of power in one person's hands increases the risk that that person can develop strategies favouring their personal interests, to the detriment of the firm. Beasly (1996) states that CEO duality increases the possibility of the preparation and disclosure of fraudulent financial statements. In the same vein, Mahoney and Thorn (2006) suggest that a dominant position of the chief executive will also be more associated with the pursuit of personal benefits than with the execution of sustainable business behaviours, which will result in less disclosure of corporate social responsibility information. From the stakeholder theory perspective, Li et al. (2008) argue that the separation of the roles of Chairman and CEO is preferable, since it tends to improve the quality of supervision, particularly in matters related to the response capacity of the stakeholders. In other words, CEO duality may cause CEOs to have negative attitudes regarding stakeholders' needs, which could take the form of reducing or not disclosing CSR matters.

The effect of CEO duality on CSR disclosure has been studied in previous research without obtaining conclusive results. Dias et al. (2017) find a positive association between CEO duality and CSR reporting. For Giannarakis (2014) and Sundarasen et al. (2016), the managerial power of CEO duality can undermine the effectiveness of the supervisory role of directors, restrict transparency to shareholders and all stakeholders and may limit the execution of certain governance roles, such as CSR disclosure. For this reason, CEO duality can have a negative effect on CSR disclosure, since managers, including the CEO, can use CSR activities for their own benefit and against the needs and interests of shareholders and stakeholders. Authors such as Chau and Gray (2010), Donnelly and Mulcahy (2008), Allegrini and Greco (2013) and De Villiers, Naiker, and van Staden (2011) show the negative impact of the CEO on the transparency of a firm in developed countries, as it decreases voluntary disclosure, including CSR information. Other authors, such as Gul and Leung

(2004) and Roberts et al. (2005), argue that CEO duality reduces overall responsibility and, therefore, makes firms less transparent, not only for shareholders but also for all interested parties.

In the case of research carried out for firms belonging to emerging market economies, Al-Janadi, Rahman, and Omar (2013) report a positive association for Saudi Arabia. Ho and Wong (2001) and Cheng and Courtenay (2006) found no association between CEO duality and voluntary disclosure. In this same line, Said, Zainuddin, and Haron (2009) also obtain a non-significant relationship for firms in Malaysia. Khan et al. (2013) revealed no association between CEO duality and CSR disclosure. According to the authors, these results may be due to the fact that, in the context of Bangladesh, the role of CEO and chairperson may not be as relevant as in most cases, since these two roles tend to be occupied by individuals of the same family, which could mean that CEO duality as a mechanism of corporate governance becomes a mere ritual. Thus, although in developed countries past research demonstrates a mainly negative relationship between CEO duality and CSR disclosure, research conducted in emerging market economies seems to show no association between the two variables. Results in preceding studies are inconclusive. Therefore, we posit the following hypothesis:

H3: Ceteris paribus, CSR disclosure is not affected by CEO duality in emerging market economies

3. Empirical design

3.1. Sample

To test the hypotheses, we use a sample composed of 204 international non-financial companies for the period 2004–2015, with 2015 being the last year for which financial, corporate governance attributes and corporate social responsibility information are available. The sample is unbalanced, since full data is not available for all companies and for all years, and it consists of a total of 934 firm-year observations. Our panel data sample is unbalanced, but it is as consistent and reliable as balanced panel data (Arellano, 2003). According to Hillier, Pindado, de Queiroz, and de la Torre (2011, p. 83), “we select an unbalanced panel in preference to a balanced approach to mitigate survivorship bias problems. The sample period (2004–2015) is fairly long, and many companies delisted, merged, or were acquired during the 12-year period. Imposing a requirement that all firms must have the same number of observations would reduce the sample to an unacceptable size: hence, we include in the final sample firms that ceased to exist.”

Financial organisations were not included in the sample because these companies comply with different accounting rules and, therefore, their financial statements are different from those of non-financial firms. The information provided by the annual financial statements of both types of firms is not comparable. The international firms of our sample belong to the following 10 countries with emerging markets: Brazil, Chile, China, Czech Republic, Egypt, India, Mexico, Russia, South Africa and Thailand. This classification of countries with emerging markets is based on the Morgan Stanley Capital International (MSCI) Emerging Markets Index, which is also used by Paramati, Alam, and Apergis (2017), who explore how stock market indicators affect CO_2 emissions in emerging and developed countries. Additionally, all countries represent emerging markets from Asia, Africa, Latin America and Eastern Europe, which are considered of maximum relevance in terms of promoting their international competitiveness and achieving sustained growth, according to Peters, Miller, and Kusyk (2011) and Jamali et al. (2017).

CSR, corporate governance, financial and sectorial data were collected from the Thomson Reuters database, which provides data of firms of several international countries, including emerging economies. All companies of the database operate in different geographic areas and are listed on several significant stock market indexes, and therefore they are representatives of the international business network due to their high market capitalisation. Our panel data sample is unbalanced but is as consistent and reliable as balanced panel data (Arellano, 2003).

In Table 1, we show the number of firms included in the sample per country. As can be observed, China presents the highest number of firms in our simple with 46, followed by Brazil, India and Russia with 33, 25 and 24, respectively.

(Insert Table 1 here)

Table 2 reports the number of observations by country and their frequencies. China is the country with the highest presence in our sample with 27.8%, followed by Brazil, India and Russia with 13.8%, 13.4% and 13.4%, respectively. Egypt is the country with the lowest presence with 1.2% representativeness.

(Insert Table 2 here)

Table 3 outlines the nine sectors in which the international firms of our sample operate. We have focused on the TRBC economic sector classification provided by Thomson Reuters, which is a market-based classification system in line with the Global Industry Classification Standard (GICS). Concerning the sectors where the firms operate, 21.5%

belong to the energy sector, 19.4% to the basic material sector and 14.3% to the industrial sector, with the healthcare sector representing the lowest percentage with 3.9%.

(Insert Table 3 here)

3.2. Variables

3.2.1. Dependent variable

Our dependent variable, CSR disclosure, is defined as CSR_DISC and is calculated as the aggregation of several items concerning social and environmental issues. Consistent with prior research (Lee, Kim, & Lee, 2012; Rupp & Mallory, 2015), our CSR reporting proxy or measure is calculated employing a multidimensional construct in order to capture all environmental and social matters disclosed by companies. The CSR disclosure index is built by the unweighted aggregation of 112 social and environmental items provided in Table 4 (e.g., Kolk & Pinkse, 2010; Gallego-Álvarez & Ortas, 2017). Each item takes the value 1 if the item considered is disclosed by the firm, and 0 otherwise, according to the Thomson Reuters database.

(Insert Table 4 here)

Several areas were examined in order to construct the CSR index. With regard to environmental matters, items relating to resource use, emissions and innovation were explored. Authors such as Liu (2012) and Leire and Mont (2010) also take into account most of these environmental issues. Concerning the social area, four fields are analysed: human rights, workforce, product responsibility and community. This classification is also used by the Global Reporting Initiative (GRI, 2016).

3.2.2. Independent variables

Our first independent variable is board independence, labelled as IND_BOARD and measured as the ratio between the total number of independent directors on boards and the total number of directors on boards. Given the independence of these directors from management and their reputation and professional background and experience, they will be more likely to engage in CSR disclosure (Arora & Dharwadkar, 2011). In this regard, Chen and Jaggi (2000) and Cheng and Courtenay (2006) report a positive association between independent directors and CSR reporting.

The second independent variable considered is the proportion of women directors on boards, defined as FEM_DIR and measured as the ratio between the total number of female directors on boards and the total number of directors on boards. According to Alonso-Almeida, Marimon, and Llach (2015) and Landry, Bernardi, and Bosco Landry (2016), female directors develop a leadership style which drives CSR reporting in developed countries. Women directors are more sensitive to CSR activities than males since they are more inclined towards education, regulation, and non-profit activity fields (e.g., Bear, Rahman, & Post, 2010). Liao, Luo, and Tang (2015) show that female directors on boards have a positive effect on CSR disclosure. However, past research (e.g., Amran et al., 2014) finds no association between the proportion of women directors on boards and CSR reporting in a sample of firms operating in emerging market economies such as China, India, Indonesia, Korea, Malaysia and Thailand. Conversely, Muttakin et al. (2015) find a negative association between female directors and CSR reporting.

CEO_DUALITY is the third independent variable used, calculated as a dummy variable that takes the value 1 when the CEO of the firm also serves as the chairperson of the board, and 0 otherwise. CEOs may behave in ways that promote their personal benefits and go against stakeholders' interests, and consequently, they will discourage CSR disclosure. However, CEOs may also be interested in reporting CSR matters since it provides them with a good reputation, success and higher compensation, among other things. In this regard, prior research finds contradictory evidence. Jizi et al. (2014) demonstrate that CEO duality will positively affect CSR disclosure, while Chau and Gray (2010) report a negative relationship, and Huafang and Jianguo (2007) also find a negative relationship between CEO duality and CSR reporting for a sample of Chinese companies. Prior evidence is based on developed countries, but Said et al. (2009) show no effect of CEO duality on CSR reporting for a sample of firms in Malaysia, an emerging market economy, and Khan et al. (2013) also find no relationship between CEO duality and the reporting of CSR matters in Bangladesh, another emerging market economy.

Our last independent variable is the presence of a CSR committee in a firm. This variable is denoted by CSR_COMMT and is calculated as a dummy variable that takes the value 1 if the firm has a CSR committee, and 0 otherwise. The existence of a CSR committee may be useful for firms to engage with environmental and social policies such as CSR disclosure. This view is supported by Mallin and Michelon (2011), who show that CSR committees in firms increase the reporting of CSR issues.

3.2.3. Control variables

Drawing on past research, several control variables that may affect our dependent variable have been considered. Firstly, we control for board size, labelled as B_SIZE and measured as the total number of directors on boards. Prior studies have reported mixed results. Said et al. (2009) find no significant results, while Htay, Rashid, Adnan, and Meera (2012) show a negative association. Akhtaruddin, Hossain, Hossain, and Yao (2009) show a positive effect. In other settings, Rouf and Harun (2011) find a non-significant association between board size and CSR disclosure. Similar results were reported by Ho and Wong (2001). Cheng and Courtenay (2006) argue that larger boards are associated with greater levels of information disclosure. Similar conclusions were reached by Byard, Li, and Weintrop (2006), De Villiers et al. (2011), Rouf (2011), Rao et al. (2012), and Allegrini and Greco (2013).

Firm size is another control variable considered, labelled as SIZE and calculated as the log of total assets. Authors such as Nawaiseh (2015) and Muttakin and Khan (2014) provide evidence of the positive association between firm size and CSR reporting. Corporate performance is also controlled for using the return on assets, labelled as ROA and measured as the operating income before interest and taxes over total assets. According to McWilliams and Siegel (2000), the return on assets has a negative impact on CSR reporting since the use of financial resources by firms to implement CSR strategies might undermine their competitiveness. Another control variable taken into account is LEVERAGE, which has been calculated as the debt over total assets (Husted & Allen, 2007; Baboukardos & Rimmel, 2016). A high leverage reduces the probability of obtaining financial resources. Consequently, firms will be less likely to report CSR information since the lack of financial funds will not allow them to become involved with CSR matters (Barnea & Rubin, 2010). In this regard, Swandari and Sadikin (2016) show a negative relationship between the level of leverage and CSR disclosure. In line with Kolk and Perego (2010), we also control for the capital intensity of firms. This variable is calculated as the ratio of long-term or fixed assets over total assets, or the ratio of gross property, plant and equipment divided by total assets (Aerts, Cormier, & Magnan, 2008), and is defined as CAPITAL_INTENSITY. Most prior research finds a non-significant association between capital intensity and CSR disclosure (Xu & Zeng, 2016). At the country level, legal institutions and culture are also controlled for. For legal institutions, we use the legal system in which the country operates, labelled as CIVIL_LAW. In this regard, this variable is measured as a dummy variable that will take the value 1 if the country operates in a country with civil law, and 0 otherwise (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). Cultural issues were measured following the national cultural dimension model created by Hofstede (1980, 2001), which was enhanced later by Hofstede, Hofstede, and Minkov (2010). To capture the cultural differences of several countries, Hofstede's model takes into account six cultural dimensions: (1) power distance, defined as POW_DIST, (2) individualism versus collectivism, defined as INDIV, (3) masculinity versus femininity, labelled as MASCUL, (4) uncertainty avoidance, labelled as UNC_AVOID, (5) long-term orientation, based on Confucian thinking and defined as LONG_ORIENTATION, and (6) indulgence versus restraint, labelled as INDULG. The six cultural dimensions range from 0 to 100, with 50 being the halfway point. Countries with a score under 50 show a low culture score, while 50 or above is considered a high culture score. All the values associated with each culture dimension are publicly available through the website of Geert Hofstede. Finally, we have also controlled for year (YEAR) and industry effects (SECTOR) by including a set of dummy variables in the model. Table 5 shows a description of all the variables used.

(Insert Table 5 here)

3.3. Model and technique of analysis

The hypotheses will be checked by estimating the following model:

$$\mathbf{CSR\_DISC_{it} = \beta_0 + \beta_1 IND\_BOARD_{it} + \beta_2 FEM\_DIR_{it} + \beta_3 CEO\_DUALITY_{it} + \beta_4 CSR\_COMMT_{it} + \beta_5 B\_SIZE_{it} + \beta_6 SIZE_{it} + \beta_7 ROA_{it} + \beta_8 LEVERAGE_{it} + \beta_9 CAPITAL\_INTENSITY_{it} + \beta_{10} CIVIL\_LAW_{it} + \beta_{11} POW\_DIST_{it} + \beta_{12} INDIV_{it} + \beta_{13} MASCUL_{it} + \beta_{14} UNC\_AVOID_{it} + \beta_{15} LONG\_ORIENTATION_{it} + \beta_{16} INDULG_{it} + \sum \beta_k SECTOR_i + \sum \beta_j YEAR_t + \theta_{it} + \gamma_i}$$

In this model, each company is represented by "i", the time period is represented by "t", and "β" is the estimated parameter. The error term ($\theta_{it} + \gamma_i$) is divided into the non-observable time-invariant, firm-specific effect (γ_i) (the unobservable heterogeneity), which is constant over time and variable among individuals (Greene, 1998), and the disturbance term (θ_{it}), which varies the cross-section and cross-time joint effect.

In this research, we use the dynamic panel data estimator of the generalised method of moments (GMM) (Arellano and Bond, 1991; Blundell and Bond, 1998). The dynamics of the procedure are controlled with the dynamic panel data method by lagging the dependent variable (introducing the temporal dependency). The GMM estimator, in contrast to other procedures, is efficient and consistent because it addresses the non-observable heterogeneity, γ_i, which is modelled as an individual effect, and is removed with the first differences of the variables. Furthermore, the GMM estimator also addresses endogeneity and decreases the bias of the estimation.

The GMM estimator provides the Arellano–Bond tests AR(1) and AR(2), and the Hansen test. The Arellano–Bond test AR(2) shows if there is, or not, a second-order serial correlation in the first difference residuals. The rejection of the null hypothesis of no serial correlation (p>0.1) supports the lack of second-order serial correlation. On the other hand, the Hansen test of over-identifying restrictions corroborates the appropriateness of the instruments employed in the estimation if the null hypothesis of non-correlation between the instruments and the error term is rejected (p>0.1).

4. Analysis of results

4.1. Descriptive statistics and correlation matrix

Table 6 provides the mean and standard deviation of all variables used in this research. The average CSR reporting score of firms operating in emerging market economies is 25.86 items out of 112 concerning environmental and social issues. This figure suggests that companies domiciled in countries with emerging market economies still rarely engage in CSR disclosure. Concerning board composition, independent directors account for 44.92% and female directors for 6.28%. While the representativeness of independent directors is high, the presence of women on boards in emerging market economies is still low. The total number of directors on boards is, on average, 11.52, CEO duality is 21%, and 50% of the companies in our sample have a CSR committee. Firm size is, on average, 9.71, the return on assets is 9.36% and leverage, on average, accounts for 76.55%. The capital intensity of firms, on average, is 9.25%, and 72% of the firms in our sample operate in a country with civil law. Finally, the six culture dimensions addressed by Hofstede (2010) will vary between 0 and 100. Power distance is, on average, 75.30, individualism is 33.60, masculinity is 53.68, uncertainty avoidance is 59.38, long-term orientation is 57.98 and indulgence is 41.63.

(Insert Table 6 here)

In Table 7, we offer the correlation matrix. According to the figures provided in the matrix, none of the coefficients is higher than 0.8 and, thus, they do not cause multicollinearity concerns. Furthermore, we have calculated the variance inflation factor (VIF) for each variable. According to past research (Greene, 1998; O'Brien, 2007; Belsley et al., 1980), a VIF higher than 10 gives rise to multicollinearity problems. As appreciated in Table 7, no VIF exceeds 10, consequently confirming no multicollinearity concerns.

(Insert Table 7 here)

4.2. Multivariate analysis

Table 8 presents the findings of all the models. In Model 1, we explore how board independence of companies in emerging market economies affects CSR disclosure. Models 2 and 3 analyse the impact of female directors on boards and CEO duality on CSR reporting in these countries, respectively. In Model 4, we examine the association between CSR committees and CSR reporting. In Model 5, we analyse the combined effect of independent directors, female directors, CEO duality and CSR committees on CSR reporting.

(Insert Table 8 here)

In Model 1, the variable of independent directors (IND_BOARD) exhibits the expected sign and is statistically significant. Thus, we have to accept the first hypothesis that board independence of companies operating in emerging market economies encourages CSR disclosure. This finding supports the view that board independence in emerging market economies plays a significant role in supervising the management team and in safeguarding shareholders' and stakeholders' needs and demands. We have calculated the coefficient of the marginal effect for the variable independent directors (0.204; $p<0.001$), which shows that an increase of 1% in the proportion of independent directors on boards causes an increase of 0.20% in the disclosure of CSR information. Independent directors are appointed for their reputation, professional background, experience, skills and objectivity, among other characteristics, which allow them to perform an active monitoring role with regard to management's behaviour. Agency theory suggests that independent directors encourage transparency and have an effect on CSR disclosure (Cheng & Courtenay, 2006; Jo & Harjoto, 2011). Stakeholder theory also proposes that independent directors tend to pay more attention to the interests of all stakeholders because they are more receptive to social demands and, therefore, motivate firms to participate more in sustainability (Ibrahim & Angelidis, 1995). Accordingly, independent directors will be more likely to encourage the reporting of CSR matters, reducing information asymmetries and, consequently, mitigating agency costs. Our evidence is consistent with the results provided by Khan et al. (2013), who report that CSR disclosure in Bangladesh, an emerging market economy, is positively affected by board independence. Our result is also in line with past research conducted in developed countries (e.g., Harjoto & Jo, 2011), which shows a positive impact of independent directors on CSR disclosure. Moreover, independent directors can pressure firms to participate in CSR disclosure in order to ensure consistency between the actions of the organisation and the values of society (Petra, 2005; Jo & Harjoto, 2011). Thus, our conclusion suggests that independent directors on boards play an active role in monitoring management in both emerging and developed market economies with regard to the disclosure of CSR issues, as Harjoto and Jo (2011) find.

Model 2 provides the findings for hypothesis 2, which posits that female directors on boards in countries with emerging market economies do not have an effect on CSR reporting. The variable FEM_DIR shows a negative sign and is statistically significant. Thus, according to this figure, we have to reject the hypothesis that CSR disclosure in emerging market economies is not impacted by women directors on boards. The coefficient of the marginal effect for the variable female directors is −0.180 ($p<0.001$), indicating that an increase of 1% in the percentage of female directors on boards causes a 0.18% decrease in the reporting of CSR information. Authors such as Muttakin et al. (2015) show a negative association between female directors and CSR disclosure in countries with emerging market economies, suggesting possible reasons for this negative relationship: (i) a lack of qualifications and educational experience of female directors, with female directors being unable to realise the importance of voluntary disclosures, which may negatively affect CSR reporting; and (ii) family ties of the directors, who tend to protect family interests and care little about CSR. In this regard, the study conducted by Katmon et al. (in press) reveals that not all dimensions of board diversity improve CSR disclosure for firms in Malaysia. The authors find that age and nationality are negatively related to CSR disclosure, indicating that the presence of different ages or nationalities reduces the quality of CSR disclosure. According to Khan (2010) and Akbas (2016), the scarcity of female directors on boards in emerging market economies may justify this finding. Most boards in the emerging market economies of our sample may be basically dominated by men directors, and therefore, the participation of female directors in the decision-making process is limited. Our evidence is contrary to findings provided by research performed in samples of developed countries. In this regard, authors such as Frías-Aceituno, Rodríguez-Ariza, and García-Sánchez (2003), Fernandez-Feijoo, Romero, and Ruiz-Blanco (2014) and Ben-Amar, Chang, and McIlkenny (2015) demonstrate a positive association between women directors on boards in developed countries and the disclosure of CSR matters. Moreover, in emerging markets, the disclosure of CSR issues may have some aspects that can be differentiated in the context, rules and regulations of developed economies, and this may result in this relation not always showing a positive sign as proposed by agency theory and stakeholder theory. Both theories argue that women directors can encourage CSR disclosure, and consequently, female directors can be good promoters of CSR issues.

Model 3 explores how CEO duality in emerging market economies affects CSR disclosure. The variable (CEO_DUALITY) exhibits a negative sign and is statistically significant. Therefore, the third hypothesis has to be rejected. This finding suggests that CEO duality on the boards of firms domiciled in countries with emerging market economies has a negative effect on the reporting of CSR information. The marginal effect coefficient for CEO duality variable is −4.009 ($p<0.001$), showing that the addition of a CEO who is also the chairperson of the board causes a decrease of 4.0% in the disclosure of CSR information. For Giannarakis (2014) and Sundarasen et al. (2016), the managerial power of CEO duality can undermine the effectiveness of the supervisory role of directors, can restrict the transparency to shareholders and all stakeholders and may limit the execution of certain governance roles, such as CSR disclosure (from the stakeholder theory and agency perspective, separation of the roles of chairperson and CEO is preferable). In the same vein, Mahoney and Thorn (2006) suggest that a dominant position of the CEO will also be associated with the pursuit of personal benefits rather than with the execution of sustainable business behaviours, which will result in less disclosure of CSR information. For this reason, CEO duality can have a negative effect on CSR disclosure, since managers, including the CEO, can use CSR activities for their own benefit and against the needs and interests of shareholders and stakeholders. Most past research conducted in developed countries (e.g., Donnelly & Mulcahy, 2008; Giannarakis, 2014) finds that CEO duality is negatively associated with the disclosure of CSR matters. This result for emerging countries is also supported by Sundarasen et al. (2016), who demonstrate that CEO duality on the boards of a sample of Malaysian companies does have a negative effect on CSR reporting. The authors argue that if the CEO is also the chairperson, role duality compromises the independence of the board, which makes the function of directors, in terms of monitoring, less effective. This result is also supported by Huafang and Jianguo (2007), who report that CEO duality on the boards of a sample of Chinese companies negatively affects CSR reporting.

In Model 4, we analyse the relation between CSR committees and CSR reporting. The variable CSR_COMMT (CSR committees) provides a positive sign, as expected, and is statistically significant. Hence, the fourth hypothesis cannot be rejected. This result suggests that the presence of CSR committees on boards in emerging market economies is an effective corporate governance mechanism for encouraging the disclosure of CSR matters since their existence is positively correlated with CSR reporting. For the CSR committees variable, the coefficient of the marginal effect is 12.178 ($p<0.001$). Thus, the inclusion of a CSR committee causes an increase of 12.17% in the reporting of CSR information. Our finding is consistent with Amran et al. (2014), who show that sustainability responding quality is positively affected by CSR committees in emerging countries such as Malaysia, Korea, China, Indonesia, Thailand and India, as well as with Adnan et al. (2010), who also provide this evidence for some emerging market economies. Prior research focused on developed market economies (e.g., Michelon & Parbonetti, 2012; Fuente, García-Sánchez, & Lozano, 2017; Konadu, 2017) also reports that CSR committees have a positive effect on the reporting of CSR information. Accordingly, it seems that CSR committees behave in a similar way in emerging and developed countries, resulting in a better disclosure of CSR issues. These corporate governance mechanisms play a relevant role in defending the interests and demands of all shareholders and stakeholders, and their effectiveness is not conditioned to the economy where the firms are domiciled. Furthermore, CSR committees may also be good drivers for reducing information asymmetries and, therefore, for mitigating agency problems, given their capacity to enhance the transparency of firms by disclosing CSR matters. Thus, these findings support the agency and stakeholder perspectives. Therefore, according to agency theory, the presence of a CSR committee aligns the interests of directors and managers and reduces the cost of debt (Muttakin & Subramaniam, 2015). Additionally, according to stakeholder theory, the firms that create CSR committees support the boards of directors in satisfying interested parties regarding the socially responsible behaviour of firms, and provide guarantees to the shareholders and all stakeholders (Dias et al., 2017). The stakeholder approach also argues that the boards of directors should be motivated to create CSR committees that monitor the links and demands of stakeholders, including the quantity and quality of CSR actions implemented.

In Table 8, we also provide Model 5, in which all the explanatory variables (independent variables) are jointly estimated. As shown, all the findings in this model are in line with the results of the models when the independent variables are solely estimated.

Concerning the control variables, board size (B_SIZE), firm size (SIZE) and indulgence (INDULG) are positive and statistically significant. Accordingly, these findings show that large firms and boards as well as countries where the culture dimension indulgence prevails are more likely to disclose CSR information. On the other hand, the return on assets (ROA), leverage (LEVERAGE) and civil law (CIVIL_LAW) variables show a negative sign and are significant. Thus, firms operating in countries with civil law and with high levels of ROA and leverage will tend to report less CSR information. In Models 4 and 5, the variable CAPITAL_INTENSITY exhibits a negative and significant sign, and power distance reports a positive and significant sign, while in Models 1, 2 and 3, these two variables are not statistically significant. The remaining control variables are not significant.

4.3. Analysis of robustness

In order to check the robustness of our findings, we also ran the five models in the GMM estimator with the dependent variable "ENVIR_DISC". This variable represents the disclosure of environmental information in emerging market economies and is measured as the aggregation of 54 items concerning environmental issues. The environmental information reported is divided into three classifications: (a) emissions, (2) innovation, and (3) resource use. The category of emissions addresses, among others, policy emissions, target emissions, biodiversity impact reduction, emissions trading, climate change commercial risk opportunities, particulate matter emission reduction and total waste reduction, while in innovation, the following items have been explored: environmental products, eco-design products, noise reduction, hybrid vehicles, environmental project financing, responsible environmental use of products, renewable clean energy products and water technologies. Environmental items in the classification of resource use are: policy environment supply chain, policy water efficiency, policy energy efficiency, green buildings and renewable energy use, among others. Each item takes the value 1 if the firm discloses information on the item considered, and 0 otherwise. This dependent variable will range from 0 to 54. In Table 9, we display the findings of all models, and it can be appreciated that the main results, when environmental disclosure is used as a dependent variable, are in line with the core findings exhibited in Table 8. This evidence shows that our results are robust and, therefore, our model is not sensitive to the dependent variable used.

(Insert Table 9 here)

5. Discussion and conclusion

Emerging market economies differ from developed countries in several aspects, such as economic development, business culture, society and historical matters, among others, which may affect the corporate governance characteristics of the firms in operation and, accordingly, the effect of corporate governance mechanisms on the disclosure of CSR matters (Khan et al., 2013). Therefore, in this paper, our aim was to explore what effects certain board attributes of firms domiciled in countries with emerging market economies have on the reporting of CSR information. Particularly, we focus on board independence, board gender diversity, CEO duality and CSR committees.

The findings report that board independence and the presence of a CSR committee are drivers of CSR disclosure, whereas CSR reporting is negatively affected by board gender diversity and CEO duality. Thus, these results suggest that the determinants of CSR disclosure depend on the economy in which firms operate: emerging or developed economies.

Our evidence has several important implications. Firstly, according to the evidence provided by past research, it seems that some corporate governance mechanisms are more effective in developed countries than in emerging market economies. Board independence and CSR committees tend to be positively associated with CSR disclosure in both emerging and developed economies. However, studies conducted in developed countries suggest that female directors on boards and CEO duality tend to encourage and discourage, respectively, the reporting of CSR information, whereas both mechanisms usually have no effect in emerging market economies. Our results find that female directors and CEO duality are negatively associated with CSR reporting. In this regard, policymakers in emerging market economies should take into account the benefits of having women directors on boards, given their positive impact on several business decisions. Hence, when legislators in emerging market economies make recommendations or laws concerning board composition, they should encourage a higher presence of female directors on boards because their scarcity on boards may be one reason for the lack of CSR reporting. Furthermore, the strong influence of families in the business structure results in boards having one person as both the CEO and chairperson of the board, as well as being part of the family ownership. Accordingly, regulatory bodies should also take significant steps in order to limit the presence of controlling family shareholders. One of the most negative outcomes of CEO duality in firms domiciled in emerging market economies is the lack of transparency, because role duality implies less CSR disclosure. Secondly, these findings may also be useful for practitioners, potential investors and other stakeholders in emerging economies. Potential investors with more sensitivity towards environmental and social matters might be interested in investing in firms whose boards have independent directors and CSR committees, given their positive impact on CSR reporting. Other stakeholders may pressure firms regarding certain board attributes (female directors and CEO duality) in order to enhance the reporting of CSR matters. Practitioners might also be interested in collaborating with firms which engage with social and environmental issues. Finally, scholars need to conduct more research on this topic. New evidence may shed some light on the effectiveness of certain corporate governance mechanisms in emerging market economies, which can become significant tools for firms interested in committing to CSR issues. In this way, companies can satisfy all stakeholders' demands and needs. Therefore, we encourage other researchers to find out more about other corporate governance mechanisms not explored in our paper.

New future lines of research can be derived from this paper. It would be interesting to analyse whether the boards of financial firms behave in a similar way to industrial firms in emerging market economies with regard to CSR reporting. Additionally, it is also recommended to examine not only the type of directors making up the boards, but also the boards' social and human capital (expertise, background, knowledge or political connections) in companies operating in countries with emerging market economies.

Notes

1 The research done by El Gammal et al. (2017) should be highlighted, which focuses on firms pertaining to the Middle East and North Africa (MENA).

References

Adams, R., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291–309.

Adams, C. A., & McNicholas, P. (2007). Making a difference: Sustainability reporting, accountability and organizational change. *Accounting, Auditing and Accountability Journal*, 20 (3), 382–402.

Adnan, S.M., Staden, C.V., & Hay, D. (2010). Do Culture and Governance structure Influence CSR Reporting Quality: Evidence from China, India, Malaysia and The United Kingdom. Unpublished Article. University of Auckland Business School, New Zealand.

Aerts, W., Cormier, D., & Magnan, M. (2008). Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economic,s* 64, 643-659.

Agrawal, A., & Knoeber, C. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Finance and Quantitative Analysis,* 31(3), 377-397.

Akbas, H.E. 2016. The relationship between board characteristics and environmental disclosure: Evidence from Turkish listed companies. *South East European Journal of Economics and Business*, 11(2), 7-19.

Al-Janadi, Y., Rahman, R.A., & Omar, N.H. (2013). Corporate Governance Mechanisms and Voluntary Disclosure in Saudi Arabia. *Research Journal of Finance and Accounting*, 38, 25-35.

Al-Malkawi, H.A.N., Rafferty, M., & Pillai, R. (2014). Corporate governance practices in emerging markets: The case of GCC countries. *Economic Modelling*, 38, 133-141.

Alonso-Almeida, M.M., Marimon, F., & Llach, J. (2015). Difusión de las memorias de sostenibilidad en Latinoamérica: análisis territorial y sectorial. *Estudios Gerenciales*, 31, 139-149.

Alotaibi, K., & Hussainey, K. 2016. Quantity versus quality: the value relevance of CSR disclosure of Saudi companies. *Corporate Ownership and Control*, 13(4), 364-393.

Akhtaruddin, M., Hossain, M.A., Hossain, M., & Yao, L. (2009). Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms. *Journal of Applied Accounting Research,* 7 (1), 1-19.

Allegrini, M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: evidence from Italian Listed Companies. *Journal of Management & Governance,* 17, 187–216.

Ammann, M., Oesch, D., & Schmid, M.M. (2011). Corporate governance and firm value: International evidence. *Journal of Empirical Finance*, 18, 36-55.

Amran, A., Lee, S.P., & Devi, S.S. (2014). The Influence of Governance Structure and Strategic Corporate Social Responsibility Toward Sustainability Reporting Quality. *Business Strategy and the Environment,* 23, 217-235.

Aras, G., & Crowther, D. (2008). Culture and corporate governance. Social Responsibility Research Network. UK.

Arellano, M., and Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *The Review of Economic Studies*, 58(2), 277-297.

Arena, C., Bozzolan, S., & Michelon, G. (2015). Environmental reporting: Transparency to stakeholders or stakeholder manipulation? An analysis of disclosure tone and the role of the board of directors. *Corporate Social Responsibility and Environmental Management*, 22 (6), 346-361.

Arora, P., & Dharwadkar R. (2011). Corporate governance and corporate social responsibility (CSR): the moderating roles of attainment discrepancy and organization slack. *Corporate Governance: An International Review*, 19 (2), 136-152.

Baboukardos, D., & Rimmel, G. (2016). Value relevance of accounting information under an integrated reporting approach: A research note. *Journal of Accounting and Public Policy*, 35, 437-452.

Balasubramanian, B., Black, B., & Khanna, V. (2010). The Relation between Firm-Level Corporate Governance and Market Value: a Study of India. Law & Economics. Working Papers. Paper 10.

Barnea, A., & Rubin, A. (2010). Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics*, 97(1), 71–86.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of directors composition and financial statement fraud. *The Accounting Review,* 71, 443-465.

Belsley, D. A., Kuh, E. & Welsch, R. E. (1980). Regression Diagnostics: Identifying Influential Data and Sources of Collinearity. New York: Wiley.

Bear, S., Rahman, N., & Post, C. 2010. The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics,* 97(2), 207-221.

Bebchuk, L.A., & Hamdani, A. (2009). The elusive quest for global governance standards. *University of Pennsylvania Law Review*, 157 (5), 1263-1317.

Ben-Amar, W., Chang, M., & McIlkenny, P. (2015). Board gender diversity and corporate response to sustainability initiatives: Evidence from the carbon disclosure project. *Journal of Business Ethics*, DOI 10.1007/s10551-015-2759-1.

Blundell, R., and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115–143.

Byard, D., Li, Y, & Weintrop, J. (2006). Corporate governance and the quality of financial analysts' information. *Journal of Accounting and Public Policy*, 25 (5), 609-625.

Bukair, A.A., & Rahman, A.A. (2015). The effect of the board of directors' characteristics on corporate social responsibility disclosure by Islamic banks. *Journal of Management Research,* 7(2), 506-519.

Carrasco, A., & Laffarga, J. (2007). La diversidad en el código de buen gobierno. Conocimiento, Innovación y Emprendedores; Camino al Futuro. *Pecvina*, 5, 1–25.

Coffey, B. S., & Wang, J. (1998). Board diversity and managerial control as predictors of corporate social performance. *Journal of Business Ethics,* 17, 1595–1603.
Chan, M.C., Watson, J., & Woodliff, D. (2014). Corporate governance quality and CSR disclosure. *Journal of Business Ethics*, 125(1), 59-73.
Chapple, W., & Ucbasaran, D. (2007). The effects of corporate governance on corporate social responsibility. Unpublished. [available from the authors].
Chau, G., & Gray, S. (2010). Family ownership, board independence and voluntary disclosure: evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation,* 19 (2), 93–109.
Chen, C., & Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, 19, 285-310.
Cheng, E. C. M., & Courtenay, S. M. (2006). Board composition, regulatory regime and voluntary disclosure. *The International Journal of Accounting*, 41(3), 262–289.
Claessens, S., & Yurtoglu, B.B. (2013). Corporate governance in emerging markets: A survey. *Emerging Markets Review*, 15, 1-33.
De Graaf, F. J., & Stoelhorst, W. (2009). The role of governance in corporate social responsibility: Lessons from Dutch finance. *Business and Society,* 52, 282-317.
De Villers, Ch., Naiker, V, & van Staden, Ch.J. (2011). The Effect of Board Characteristics on Firm Environmental Performance. *Journal of Management*, 37, 1636-1663.
Dias, A., Rodrigues, L.L., & Craig, R. (2017). Corporate governance effects on social responsibility disclosures. *Australasian Accounting Business and Financial Journal*, 11(2), 3-22.
Donnelly, R., & Mulcahy, M. (2008). Board structure, ownership, and voluntary disclosure in Ireland. *Corporate Governance: An International Review*, 16 (5), 416–429.
ElGammal, W., El-Kassar, A-N., & Messarra, L.C. 2018. Corporate ethics, governance and social responsibility in MENA countries. *Management Decision,* 56 (1), 273-291.
Eng, L., & Mak, Y. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 22 (4), 325-345.
Fernandez-Feijoo, B., Romero, S., & Ruiz-Blanco, S. (2014). Women on boards: do they affect sustainability reporting?. *Corporate Social Responsibility and Environmental Management,* 21 (6), 351-364.
Fligstein, N. 1991. The structural transformation of American industry: An institutional account of the causes of diversification in the largest firms, 1919–1979. In W. W. Powell & P. J. DiMaggio (Eds.), The new institutionalism in organizational analysis: 311–36. Chicago, IL: University of Chicago Press.
Freeman, R. E. 1984. Strategic management: A stakeholder approach. Boston, MA: Pitman.
Frías-Aceituno, J. V., Rodríguez-Ariza, L., & García-Sánchez, I. M. (2013). The role of the board in the dissemination of integrated corporate social reporting. *Corporate Social Responsibility and Environmental Management*, 20 (4), 219-233.
Fuente, J. A., García-Sánchez, I. M., & Lozano, M. B. (2017). The role of the board of directors in the adoption of GRI guidelines for the disclosure of CSR information. *Journal of Cleaner Production*, 141, 737-750.
Gallego-Álvarez, I., & Ortas, E. (2017). Corporate environmental sustainability reporting in the context of national cultures: A quartile regression approach. *International Business Review,* 2, 337-353.
Giannarakis, G. 2014. The determinants influencing the extent of CSR disclosure. *International Journal of Law and Management,* 56(5), 393-416.
Global Reporting Initiative. (2016). Consolidated Set of GRI Sustainability Reporting Standards, The Netherlands.

Greene, W. H. (1998). Econometric analysis, third edition. New Jersey: Prentice Hall.

Guest, P. M. (2009). The impact of board size on firm performance: Evidence from the UK. *European Journal of Finance*, 15(4), 385–404.

Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, 23(5), 351–379.

Gul, F. Srinidhi, B., & Ng, A. (2011). Does board gender diversity improve the informativeness of stock prices?. *Journal of Accounting and Economics,* 51, 314–338.

Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics*. 100 (1), 45-67.

Harjoto, M., Laksmana, I., & Lee, R. (2015). Board diversity and corporate social responsibility. *Journal of Business Ethics*, 132(4), 641-660.

Hillier, D., Pindado, J., de Queiroz, V., & de la Torre, Ch. (2011). The impact of country-level corporate governance on research and development. *Journal of Business Studies*, 42, 76-98.

Hillman, A.J., Cannella Jr, A., & Harris, I.C. (2002). Women and Racial Minorities in the Boardroom: How do Directors Differ?. *Journal of Management,* 28, 747–763.

Ho, S. M., & Wong, K. S. (2001). A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of Accounting, Auditing and Taxation*, 10 (1), 139–156.

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Newbury Park: Sage Publications.

Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. Thousand Oaks: Sage Publications.

Hofstede, G., Hofstede, G.J., & Minkov, M. (2010). Cultures and Organizations: Software of the Mind (10th Edition). USA: McGraw-Hill.

Hossain, M., Alam, M., Hecimovic, A., Hossain, M.A., & Lema A. C. (2016) Contributing barriers to corporate social and environmental responsibility practices in a developing country: A stakeholder perspective. *Sustainability Accounting, Management and Policy Journal*, 7(2), 319-346.

Htay, S., Rashid, H., Adnan, M., & Meera, A. (2012). Impact of corporate governance on Social and environmental information disclosure of Malaysian listed banks: Panel data analysis. *Asian Journal of Finance and Accounting*, 4 (1), 1-24.

Huang, Ch-L., & Kung, F-H. (2010). Drivers of environmental disclosure and stakeholder expectation: Evidence from Taiwan. *Journal of Business Ethics*, 96, 435-451.

Huafang, X., & Jianguo, Y. (2007). Ownership structure, board composition and corporate voluntary disclosure: Evidence from listed companies in China, *Managerial Auditing Journal*, 22 (6), 604-619.

Husted, B.W., & Allen, D.B. (2007). Strategic corporate social responsibility and value creation among large firms. Lessons from the Spanish experience. *Long Range Planning*, 40, 594-610.

Ibrahim, N. A., & Angelidis, J. P. (1994). Effect of board members' gender on corporate social responsiveness orientation. *Journal of Applied Business Research*, 10, 35–43.

Ibrahim, N. A., Howard, D. P., & Angelidis, J. P. (2003). Board members in the service industry: An empirical examination of the relationship between corporate social responsibility orientation and directional type. *Journal of Business Ethics,* 47(4), 393–401.

Ibrahim, N.A., & Angelidis, J.P. (1995). The corporate social responsiveness orientation of board members: are there differences between inside and outside directors?. *Journal of Business Ethics,* 14 (5), 405-419.

Jain, T., & Jamali, D. (2016). Looking inside the black box: the effect of corporate governance on corporate social responsibility. *Corporate Governance: An International Review*, 24 (3), 253-273.

Jamali, D., Safieddine, A., & Rabbath, M. (2008). Corporate governance and corporate social responsibility synergies and interrelationships. *Corporate Governance: An International Review*, 16(5), 443–459.

Jamali, D., Karam, C., Yin, J., & Soundararajan, V. (2017). CSR logics in developing countries: Translation, adaptation and stalled development. *Journal of World Business*, 52(3), 343-359.

Jensen, M. C. (1986). The agency costs of free cash flow. *American Economic Review-Papers and Proceedings*, 76, 326-329.

Jensen, M. C., & Meckling, W.H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.

Jizi, M. (2017). The Influence of board composition on sustainable development disclosure. *Business Strategy and the Environment*, 26, 640-655.

Jizi, M., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate governance and the content of corporate social responsibility disclosure. *Journal of Business Ethics*, 125(4), 601-615.

Jo, H., & Harjoto, M. A. (2011). Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics*, 103 (3), 351-383.

Katmon, N., Mohamad, Z. Z., Norwani, N. M., & Farooque, O. A. (in press). Comprehensive Board Diversity and Quality of Corporate Social Responsibility Disclosure: Evidence from an Emerging Market. *Journal of Business Ethics* DOI 10.1007/s10551-017-3672-6.

Kent, P., & Monem, R. (2008). What drives TBL reporting: Good governance or threat to legitimacy?. *Australian Accounting Review*, 18, 297–309.

Khan, H. U. Z. (2010). The effect of corporate governance elements on corporate social responsibility (CSR) reporting: Empirical evidence from private commercial banks of Bangladesh. *International Journal of Law and Management*, 52 (2), 82-109.

Khan, A., Muttakin, M.B., & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: Evidence from an Emerging Economies. *Journal of Business Ethics,* 114, 207-223.

Kiel, G. C., & Nicholson, G. J. (2003). Boards that Work: A New Guide for Directors. Sydney: McGraw Hill.

Kim, H. (2013). Glass fence thicker than glass ceiling: The puzzling gaps of women's leadership in Korea. In J. Rajasekar (Ed.), Culture and gender in leadership: Perspectives from the Middle East and Asia (pp. 253–274). Hampshire, England: Palgrave Macmillan.

Kolk, A., & Perego, P. (2010). Determinants of the Adoption of Sustainability Assurance Statements: An International Investigation. *Business Strategy and Environment*, 19, 182–198.

Kolk, A., & Pinkse, J. (2010). The integration of corporate governance in corporate social responsibility disclosures. *Corporate Social Responsibility and Environmental Management,* 17, 15-26.

Konadu, R. (2017). Gender diversity impact on corporate social responsibility (CSR) and Greenhouse Gas emissions in the UK. *Economics and Business Review*, 3(1), 127-148.

Landry, E.E., Bernardi, R.A., & Bosco, S.M. (2014). Recognition for sustained corporate social responsibility: female directors make a difference. *Corporate Social Responsibility and Environmental Management,* 23, 27-36.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1998). Law and finance. *Journal of Political Economy*, 106, 1113–1155.

Lee, Y.K., Kim, Y.S., Lee, K.H., & Li, D. (2012). The impact of CSR on relationship quality and relationship outcomes: a perspective of service employees. *International Journal of Hospitality Management,* 31, 745–756.

Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *British Accounting Review*, 47, 409–424.

Li, J., Pike, R., & Haniffa, R. (2008). Intellectual capital disclosure and corporate governance structure in UK firms. *Accounting and Business Research*, 38 (2), 137-159.

Lone, E.J., Ali, A., & Khan, I. (2016). Corporate governance and corporate social responsibility disclosure: evidence from Pakistan. *Corporate Governance*, 16(5), 785-797.

Gul, F., & Leung, S. (2004). Board leadership, outside directors expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, 23, 351-379.

Mahoney, L. S., & Thorn, L. (2006). An examination of the structure of executive compensation and corporate social responsibility: A Canadian investigation. *Journal of Business Ethics*, 69, 149-162.

Mallin, C. A., & Michelon, G. (2011). Board reputation attributes and corporate social performance: An empirical investigation of the US Best Corporate Citizens. *Accounting and Business Research,* 41(2), 119–144.

Melero, E. (2011). Are workplaces with many women in management run differently?. *Journal of Business Research*, 84 (4), 385-393.

Michelon, G., & Parbonetti, A. (2012). The effect of corporate governance on sustainability Disclosure. *Journal of Management and Governance*, 16, 447-509.

Muttakin, M. B., & Khan, A. (2014). Determinants of corporate social disclosure: Empirical evidence from Bangladesh. *Advances in Accounting*, 30 (1),168-175

Muttakin, M. B., Khan, A., & Subramaniam, N. (2015). Firm characteristics, board diversity and corporate social responsibility: Evidence from Bangladesh. *Pacific Accounting Review*, 27 (3), 353-372.

Nawaiseh, M.E. (2015). Do firm size and financial performance affect corporate social responsibility disclosure: Employees' and environmental dimensions?. *American Journal of Applied Sciences,* 12 (12), 967-981.

O´Brien, R.M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality & Quantity,* 41, 673-690.

Paramati, S.R., Alam, M., & Apergis, N. (2017). The role of stock markets on environmental degradation: A comparative study of developed and emerging market economies across the globe. *Emerging Market Reviews,* doi.org/10.1016/j.ememar.2017.12.004

Peters, P., Miller, M., & Kusyk, S. (2011). How relevant is corporate governance and corporate social responsibility in emerging markets?. *Corporate Governance: The international journal of business in society,* 11 (4), 429-445.

Petra, S. T. (2005). Do outside independent directors strengthen corporate boards. *Corporate Governance*, 5 (1), 55-64.

Rao, K., Tilt, C., & Lester, L. (2012). Corporate governance and environmental reporting: an Australian study. *Corporate Governance: The International Journal of Business in Society*, 12 (2), 143-163.

Rao, K., & Tilt, C. (2016). Board composition and corporate social responsibility: The role of diversity, gender, strategy and decision making. *Journal of Business Ethics*, 138, 327-347.

Rechner, P. L., & Dalton, D. R. (1991). CEO duality and organizational performance: A longitudinal analysis. *Strategic Management Journal,* 12, 155–160.

Roberts, J., McNulty, T., & Stiles, P. (2005). Beyond agency conceptions of the work of the nonexecutive director: Creating accountability in the boardroom. *British Journal of Management,* 16(1), 5–26.

Rodríguez-Ariza, L., Frías-Aceituno, J. V., & García-Rubio, R. (2014). El consejo de administración y las memorias de sostenibilidad. *Spanish Accounting Review*, 17, 5-16.

Rouf, M. (2011). The relationship between corporate governance and value of the firm in developing countries: Evidence from Bangladesh. *International Journal of Applied Economics and Finance,* 5, 237-244.

Rouf, A., & Harun, A.A. (2011). Ownership structure and voluntary disclosure in annual reports of Bangladesh. *Pakistan Journal of Commerce & Social Sciences*, (5) 1, 129-139.

Rupp, D.E., & Mallory, D.B. (2015). Corporate social responsibility: psychological, person-centric, and progressing. *Annual Review of Organizational Psychology and Organizational Behavior*, 2, 211–236.

Said, R., Zainuddin, Y.H., & Haron, H. (2009). The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. *Social Responsibility Journal*, 5(2), 212-226.

Savitz, A.W., & Weber, K. (2006). The Triple Bottom Line: How today's Best Run Companies Are Achieving Economic, Social and Environmental Success and How You Can Too: John Wiley & Sons: New York.

SEC. (2006). Order relative to Corporate Governance. Securities and Exchange Commission. Bangladesh. SEC/CMRRCD.

Singh, A., & Verma, P. (2014). CSR@ 2%: A New Model of Corporate Social Responsibility in India. *International Journal of Academic Research in Business and Social Sciences,* 4 (10), 455-464.

Sundarasen, Sh. D.D., Je-Yen, T., & Rajangam, N. (2016). Board composition and corporate social responsibility in an emerging market. *Corporate Governance,* 16(1), 35-53.

Surroca, J., & Tribó, J. A. (2008). Managerial entrenchment and corporate social performance. *Journal of Business Finance and Accounting*, 35, 748-89.

Swandari, F., & Sadikin, A. (20169. The effect of ownership structure, profitability, leverage and firm size on corporate social responsibility (CSR). *Binus Business Review*, 7(3), 315-320.

Tamini, N., & Sebastianelli, R. (2017). Transparency among S&P 500 companies: an analysis of ESG disclosure scores. *Management Decision*, 55(8), 1660-1680.

Wahyuni, D., Rankin, M., & Windsor, C. (2009). Towards emissions trading: the role of environmental management systems in voluntarily disclosing greenhouse gas emissions. Paper presented at AFAANZ Conference 2009, Adelaide, Australia.

World Bank. (2009). Bangladesh: Corporate governance country assessment. Report on the Observance of Standards and Codes (ROSC).

Xu, B., & Zeng, T. (2016). Profitability, state ownership, tax reporting and corporate social responsibility: evidence from Chinese listed firms. *Social Responsibility Journal*, 12(1), 23-31.

Table 1
Number of firms by country

Country	Firms	Percentage	Cum.
Brazil	33	16.17%	16.17%
Chile	17	8.33%	24.50%
China	46	22.54%	47.05%
Czech Republic	3	1.47%	48.52%
Egypt	5	2.45%	50.98%
India	25	12.25%	63.23%
Mexico	20	9.80%	73.03%
Russia	24	11.76%	84.80%
South Africa	12	5.88%	90.68%
Thailand	19	9.31 %	100%
Total	**204**	**100**	

Table 2
Number of observations by country

Country	Observations	Percentage	Cum.
Brazil	129	13.8%	13.8%
Chile	47	5.0%	18.8%
China	260	27.8%	46.6%
Czech Republic	19	2%	48.6%
Egypt	11	1.2%	49.8%
India	125	13.4%	63.2%%
Mexico	89	9.5%	72.7%%
Russia	125	13.4%	86.1%
South Africa	60	6.4%	92.5%
Thailand	69	7.5 %	100%
Total	**934**	**100**	

Table 3
Number of observations by activity sector

TRBC economic sector name	Number of observations	Percentage	Cum.
Basic Materials	181	19.4%	19.4%
Consumer cyclical	98	10.5%	29.9%
Consumer Non-Cyclical	111	11.9%	41.8%
Energy	201	21.5%	63.3%
Healthcare	36	3.9%	67.1%
Industrial	134	14.3%	81.5%
Technology	50	5.4%	86.8%
Telecommunications Services	56	6.0%	92.8%
Utilities	67	7.2%	100%
Total	**934**	**100,0**	

Table 4
Corporate social responsibility disclosure

Environmental			Social			
Resource use	**Emissions**	**Innovation**	**Workforce**	**Human rights**	**Community**	**Product responsibility**
Resource reduction policy	Policy emissions	Environmental products	Health and safety policy	Human rights policy	Employee engagement volunt work	Policy customer health and safety
Policy water efficiency	Targets emissions	Eco-design products	Policy employee health and safety	Policy freedom of association	Corporate responsibility awards	Policy data privacy
Policy energy efficiency	Biodiversity impact reduction	Noise reduction	Policy supply chain health and safety	Policy child labor	Product sales at discount to emerging markets	Policy responsible marketing
Policy sustainable packaging	Emissions trading	Hybrid vehicles	Training and development policy	Policy forced labor	Diseases of the developing world	Policy fair trade
Policy environment supply chain	Climate change commercial risks opportunities	Environmental assets under MGT	Policy skills training	Policy human rights	Bribery corruption and fraud controversies	Product responsibility monitor
Resource reduction targets	Nox and Sox emissions reduction	Equator principles	Policy career development	Fundamental human rights ILO UN	Crisis management systems	Quality mgt systems
Environment management team	Voc or particulate matter emissions	Equator principles or environmental projects	Policy diversity and opportunity	Human rights contractor	Anti competition controversies	ISO 9000
Environment management training	Voc emissions reduction	Environmental project financing	Employees health and safety team	Ethical trading initiative ETI		Six sigma and quality mgt systems
Environmental materials sourcing	Particulate matter emission reduction	Nuclear	Health and safety training	Human rights breaches contractor		Product access low price
Toxic chemicals reduction	Waste reduction total	Labeled wood	Supply chain health and safety training			Healthy food or products
Renewable energy use	e-Waste reduction	Organic products initiatives	Employees health and safety OHSAS 18001			Embryonic stem cell research
Green buildings	Environmental restoration initiatives	Product impact minimization	Flexible working hours			Retailing responsibility
Environmental supply chain management	Staff transportation impact reduction	Take-back and recycling initiatives	Day care services			alcohol

Environmental supply chain monitoring	Environmental expenditures investment	Product environmental responsible use	Employee fatalities	gambling
Env supply chain partnership termination		GMO products	HIV-AIDS program	tobacco
Land environmental impact reduction		Agrochemical products	Internal promotion	armaments
Environmental controversies		Agrochemical 5% revenue	Management training	Obesity risk
		Animal testing in the last 12fy	Supplier ESG training	Cluster bombs
		Animal testing cosmetics	Wages working condition controversies	Antipersonal landmines
		Animal testing reduction		Consumer complaints
		Renewable clean energy products		Customer controversies
		Water technologies		Responsible marketing controversies
		Sustainable building products		Product recall

Table 5
Variables description

Variables	Description
CSR_DISC	The aggregation of the 112 items considered. Each item will take the value 1 if the item considered is disclosed by the firm and 0, otherwise.
IND_BOARD	Proportion of independent directors on boards= Total number of independent on boards/ Total number of directors on boards
FEM_DIR	Proportion of female directors on boards= Total number of female directors on boards/Total number of directors no boards
CEO_DUALITY	Dummy variable that takes the value 1 if the same person serves simultaneously as CEO and President of the board and 0, otherwise
CSR_COMMT	Dummy variable that takes the value 1 if the firm has a CSR committee and 0, otherwise
B_SIZE	The total number of directors on boards
SIZE	The log of total assets
ROA	Operate income before interests and taxes over total assets
LEVERAGE	Debt over total assets
CAPITAL_INTENSITY	Ratio of long-term or fixed assets over total assets
CIVIL_LAW	Dummy variable that takes the value 1 if the company operates in a civil law country and 0, otherwise
POW_DIST	Power distance is one of the six culture dimensions addressed by Hostfede (2010) and it ranges from 0 to 100
INDIV	Individualism is one of the six culture dimensions addressed by Hostfede (2010) and it ranges from 0 to 100
MASCUL	Masculinity is one of the six culture dimensions addressed by Hostfede (2010) and it ranges from 0 to 100
UNC_AVOID	Uncertainty avoidance is one of the six culture dimensions addressed by Hostfede (2010) and it ranges from 0 to 100
LONG_ORIENTATION	Long-term orientation is one of the six culture dimensions addressed by Hostfede (2010) and it ranges from 0 to 100
INDULG	Indulgence is one of the six culture dimensions addressed by Hostfede (2010) and it ranges from 0 to 100

Table 6
Descriptive analysis

Variable	Obs	Mean	Standard Deviation	Min.	Max.
CSR_DISC	934	25.86	17.16	0	112
IND_BOARD	934	44.92%	18.19%	0%	100%
FEM_DIR	934	6.28%	8.45%	0%	40%
CEO_DUALITY	934	21%	40.66%	0	1
CSR_COMMT	934	50%	50.02%	0	1
B_SIZE	934	11.52	3.47	5	33
SIZE	934	9.71	1.43	8.38	11.47
ROA	934	9.36%	8.25%	-8.09%	50.10%
LEVERAGE	934	76.55%	106.55%	1.02%	97.43%
CAPITAL_INTENSITY	934	9.25%	5.99%	0.42%	39.21%
CIVIL_LAW	934	72%	44%	0	1
POW_DIST	934	75.30	11.21	49	93
INDIV	934	33.60	13.52	20	65
MASCUL	934	53.68	13.37	28	69
UNC_AVOID	934	59.38	24.52	30	95
LONG_ORIENTATION	934	57.98	24.83	7	87
INDULG	934	41.63	24.67	4	97

Mean, standard deviation, min and max of the main variables. CSR_DISC is the dependent variable measured as the sum of a maximum of 112 items provided by the company; IND_BOARD is the proportion of independent directors on boards; FEM_DIR is the proportion of female directors on boards; CEO_DUALITY is a dummy variable that takes the value 1 if the same person serves simultaneously as CEO and President of the board and 0, otherwise; CSR_COMMT is a dummy variable that takes the value 1 if the firm has a CSR committee and 0, otherwise; B_SIZE is the total number of directors on boards; SIZE is the log of total assets; ROA is the return on assets and is measured as operate income before interests and taxes over total assets; LEVERAGE is the ratio of total debt to total assets; CAPITAL_INTENSITY is the ratio of long-term or fixed assets over total assets; CIVIL_LAW is a dummy variable that takes the value 1 if the company operates in a civil law country and 0, otherwise; POW_DIST is power distance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDIV is individualism, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; MASCUL is masculinity, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; UNC_AVOID is uncertainty avoidance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; LONG_ORIENTATION is long-term orientation, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDULG is indulgence, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100.

Table 7
Correlation matrix

	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
CSR_DISC (1)	2.16	1.0000																
IND_BOARD (2)	1.29	0.147***	1.000															
FEM_DIR (3)	1.20	0.110***	-0.008	1.000														
CEO_DUALITY (4)	1.16	-0.064*	0.083**	-0.131***	1.000													
CSR_COMMT (5)	1.74	0.636***	0.115***	0.109***	-0.056*	1.000												
B_SIZE (6)	1.51	0.219***	0.003	0.138***	-0.024	0.139***	1.000											
SIZE (7)	1.09	0.282***	-0.044	-0.098***	0.011	0.221***	0.156***	1.000										
ROA (8)	1.34	-0.040	0.072**	0.056*	0.071**	-0.047	0.092***	-0.279***	1.000									
LEVERAGE (9)	1.14	0.011	-0.079**	-0.050	-0.020	0.006	-0.094***	0.2534***	-0.525***	1.000								
CAPITAL_INTENSITY (10)	1.17	0.012	-0.033	-0.081**	0.008	0.042	0.105***	0.141***	0.270***	-0.150***	1.000							
CIVIL_LAW (11)	6.40	-0.319***	-0.331***	-0.248***	-0.023	-0.186***	-0.342***	0.195***	-0.261***	0.117***	-0.035	1.000						
POW_DIST (12)	3.59	-0.198***	-0.107**	-0.256***	0.090**	-0.214***	0.062*	0.269***	-0.029	-0.0358	0.132***	0.508***	1.000					
INDIV (13)	6.06	0.372***	0.291***	0.172***	-0.057*	0.180***	0.021	-0.121***	0.168***	-0.185***	0.095***	-0.422***	-0.172***	1.000				
MASCUL (14)	8.80	-0.121***	0.078**	-0.085***	0.215***	-0.038	0.151***	0.096***	0.050	-0.083**	-0.052	0.219***	0.337***	-0.263***	1.000			
UNC_AVOID (15)	9.70	0.116***	-0.065**	0.015	0.227***	0.024	-0.0329	-0.089***	-0.063**	0.025	0.019	0.184***	0.136***	0.432***	-0.557***	1.000		
LONG_ORIENTATION (16)	5.20	-0.245***	-0.0627**	-0.171***	0.137***	-0.168***	-0.189***	0.297***	-0.029	-0.034	0.169***	0.298***	0.432***	-0.303***	0.277***	-0.591***	1.000	
INDULG(17)	3.06	0.236***	0.115***	0.177***	-0.029	0.201***	0.150***	-0.258***	0.042	0.03	-0.194***	-0.221***	-0.556***	0.167***	0.085***	0.217***	-0.800***	1.000

Correlation matrix and the Variance Inflation Factor (VIF). CSR_DISC is the dependent variable measured as the sum of a maximum of 112 items provided by the company; IND_BOARD is the proportion of independent directors on boards; FEM_DIR is the proportion of female directors on boards; CEO_DUALITY is a dummy variable that takes the value 1 if the same person serves simultaneously as CEO and President of the board and 0, otherwise; CSR_COMMT is a dummy variable that takes the value 1 if the firm has a CSR committee and 0, otherwise; B_SIZE is the total number of directors on boards; SIZE is the log of total assets; ROA is the return on assets and is measured as operate income before interests and taxes over total assets; LEVERAGE is the ratio of total debt to total assets; CAPITAL_INTENSITY is the ratio of long-term or fixed assets over total assets; CIVIL_LAW is a dummy variable that takes the value 1 if the company operates in a civil law country and 0, otherwise; POW_DIST is power distance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDIV is individualism, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; MASCUL is masculinity, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; UNC_AVOID is uncertainty avoidance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; LONG_ORIENTATION is long-term orientation, one of the six culture dimensions addressed by

Hostfede (2010), and ranges from 0 to 100; INDULG is indulgence, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100. *** Significant at 1%, ** at 5% and * at 10%.

Table 8
Results of the Generalized Method of Moments

	MODEL 1 Coef. P>|t|	MODEL 2 Coef. P>|t|	MODE 3 Coef. P>|t|	MODEL 4 Coef. P>|t|	MODEL 5 Coef. P>|t|
CSR_DISC(t-1)	0.521*** (0.000)	0.534*** (0.000)	0.512*** (0.000)	0.431*** (0.000)	0.416*** (0.000)
IND_BOARD	0.098 *** (0.000)				0.101*** (0.000)
FEM_DIR		-0.208*** (0.000)			-0.156*** (0.000)
CEO_DUALITY			-1.441*** (0.000)		-1.553*** (0.000)
CSR_COMMT				7.025*** (0.000)	7.368*** (0.000)
B_SIZE	0.695*** (0.000)	0.755*** (0.000)	0.688*** (0.000)	0.632*** (0.000)	0.686*** (0.000)
SIZE	0.455* (0.078)	0.500* (0.052)	0.650** (0.017)	0.761*** (0.007)	0.560* (0.055)
ROA	-0.498*** (0.000)	-0.430*** (0.000)	-0.522*** (0.000)	-0.382*** (0.000)	-0.419*** (0.000)
LEVERAGE	-0.053*** (0.000)	-0.055*** (0.000)	-0.057*** (0.000)	-0.055*** (0.000)	-0. 058*** (0.000)
CAPITAL_INTENSITY	-0.034 (0.354)	-0.048 (0.250)	-0.030 (0.564)	-0.088* (0.056)	-0.143*** (0.002)
CIVIL_LAW	-15.690** (0.039)	-14.627** (0.033)	-16.531* (0.016)	-17.690*** (0.009)	-19.265** (0.014)
POW_DIST	6.333 (0.363)	3.078 (0.668)	6.548 (0.402)	16.577*** (0.005)	14.582** (0.039)
INDIV	1.694 (0.825)	5.837 (0.405)	4.387 (0.523)	3.941 (0.554)	1.777 (0.817)
MASCUL	3.840 (0.687)	0.705 (0.930)	6.132 (0.431)	5.376 (0.484)	2.424 (0.814)
UNC_AVOID	-2.039 (0.849)	-3.608 (0.688)	-1.524 (0.867)	0.801 (0.928)	-2.208 (0.833)
LONG_ORIENTATION	-0.236 (0.977)	4.342 (0.542)	3.666 (0.624)	7.326 (0.298)	5.384 (0.492)
INDULG	9.509* (0.051)	14.724*** (0.000)	12.181*** (0.007)	12.665*** (0.001)	12.396*** (0.003)

Industry effect	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes
Arellano-Bond test AR(1) (z, p>|z|)	-4.71 (0.000)	-4.81 (0.000)	-4.84 (0.000)	-4.62 (0.000)	-4.55 (0.000)
Arellano-Bond test AR(2) (z, p>|z|)	0.92 (0.357)	0.96 (0.338)	0.69 (0.489)	0.98 (0.327)	1.30 (0.193)
Hansen test (Chi-square, p>|Chi^2|)	90.79 (0.603)	93.71 (0.518)	93.02 (0.538)	89.60 (0.637)	89.60 (0.551)

Estimated coefficients using the Generalized Method of Moments (GMM). CSR_DISC is the dependent variable measured as the sum of a maximum of 112 items provided by the company; IND_BOARD is the proportion of independent directors on boards; FEM_DIR is the proportion of female directors on boards; CEO_DUALITY is a dummy variable that takes the value 1 if the same person serves simultaneously as CEO and President of the board and 0, otherwise; CSR_COMMT is a dummy variable that takes the value 1 if the firm has a CSR committee and 0, otherwise; B_SIZE is the total number of directors on boards; SIZE is the log of total assets; ROA is the return on assets and is measured as operate income before interests and taxes over total assets; LEVERAGE is the ratio of total debt to total assets; CAPITAL_INTENSITY is the ratio of long-term or fixed assets over total assets; CIVIL_LAW is a dummy variable that takes the value 1 if the company operates in a civil law country and 0, otherwise; POW_DIST is power distance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDIV is individualism, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; MASCUL is masculinity, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; UNC_AVOID is uncertainty avoidance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; LONG_ORIENTATION is long-term orientation, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDULG is indulgence, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; industry and year effects are also controlled, Arellano-Bond test AR(1) and AR(2) are the tests of serial correlations under the null hypothesis of no serial correlation and Hansen test is the test of over-identifying restrictions under the null hypothesis of non-correlation between the instruments and the error term. *** Significant at 1%, ** at 5% and * at 10%.

Table 9
Results of the Generalized Method of Moments for the robustness analysis

	MODEL 1 Coef. P>|t|	MODEL 2 Coef. P>|t|	MODE 3 Coef. P>|t|	MODEL 4 Coef. P>|t|	MODEL 5 Coef. P>|t|
ENVIR_DISC(t-1)	0.671*** (0.000)	0.684*** (0.000)	0.715*** (0.000)	0.596*** (0.000)	.536*** (0.000)
IND_BOARD	0.037 *** (0.000)				0.030*** (0.000)
FEM_DIR		-0.043*** (0.005)			-0.061*** (0.003)
CEO_DUALITY			-0.526** (0.010)		-0.860*** (0.000)
CSR_COMMT				3.408*** (0.000)	3.825*** (0.000)
B_SIZE	0.333*** (0.000)	0.286*** (0.000)	0.268*** (0.000)	0.216*** (0.000)	0.219*** (0.000)
SIZE	0.042 (0.755)	0.090 (0.518)	0.013 (0.927)	-0.192 (0.184)	-0.098 (0.549)
ROA	-0.281*** (0.000)	-0.239*** (0.000)	-0.246*** (0.000)	-0.213*** (0.000)	-0.197*** (0.000)
LEVERAGE	-0.015*** (0.001)	-0.016*** (0.000)	-0.013*** (0.001)	-0.007** (0.027)	-0.012*** (0.000)
CAPITAL_INTENSITY	-0.076*** (0.003)	-0.071 (0.001)	-0.064*** (0.004)	-0.125*** (0.000)	-0.119*** (0.001)
CIVIL_LAW	-9.278*** (0.007)	-6.371** (0.015)	-10.534*** (0.001)	-3.521 (0.177)	-10.108*** (0.004)
POW_DIST	8.700** (0.030)	2.658 (0.407)	5.019 (0.171)	9.124** (0.011)	12.069*** (0.001)
INDIV	0.818 (0.820)	1.301 (0.671)	-1.118 (0.732)	4.830 (0.122)	0.924 (0.787)
MASCUL	-0.600 (0.888)	-2.311 (0.438)	3.538 (0.357)	-4.979* (0.063)	1.593 (0.685)
UNC_AVOID	-3.181 (0.501)	-6.086* (0.077)	0.71 (0.868)	-9.111*** (0.009)	-2.555 (0.587)
LONG_ORIENTATION	7.112** (0.040)	0.740 (0.679)	6.100** (0.047)	-2.48 (0.147)	5.040 (0.157)
INDULG	9.048*** (0.000)	5.240*** (0.001)	6.907*** (0.000)	3.911*** (0.008)	7.179*** (0.003)

Industry effect	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes
Arellano-Bond test AR(1) (z, p>|z|)	-5.25 (0.000)	-5.34 (0.000)	-5.54 (0.000)	-5.15 (0.000)	-5.01 (0.000)
Arellano-Bond test AR(2) (z, p>|z|)	1.20 (0.288)	1.56 (0.120)	1.70 (0.089)	1.83 (0.067)	1.99 (0.460)
Hansen test (Chi-square, p>|Chi^2|)	102.12 (0.243)	106.10 (0.167)	101.93 (0.247)	113.53 (0.073)	95.63 (0.322)

Estimated coefficients using the Generalized Method of Moments (GMM). CSR_DISC is the dependent variable measured as the sum of a maximum of 112 items provided by the company; IND_BOARD is the proportion of independent directors on boards; FEM_DIR is the proportion of female directors on boards; CEO_DUALITY is a dummy variable that takes the value 1 if the same person serves simultaneously as CEO and President of the board and 0, otherwise; CSR_COMMT is a dummy variable that takes the value 1 if the firm has a CSR committee and 0, otherwise; B_SIZE is the total number of directors on boards; SIZE is the log of total assets; ROA is the return on assets and is measured as operate income before interests and taxes over total assets; LEVERAGE is the ratio of total debt to total assets; CAPITAL_INTENSITY is the ratio of long-term or fixed assets over total assets; CIVIL_LAW is a dummy variable that takes the value 1 if the company operates in a civil law country and 0, otherwise; POW_DIST is power distance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDIV is individualism, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; MASCUL is masculinity, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; UNC_AVOID is uncertainty avoidance, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; LONG_ORIENTATION is long-term orientation, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; INDULG is indulgence, one of the six culture dimensions addressed by Hostfede (2010), and ranges from 0 to 100; industry and year effects are also controlled, Arellano-Bond test AR(1) and AR(2) are the tests of serial correlations under the null hypothesis of no serial correlation and Hansen test is the test of over-identifying restrictions under the null hypothesis of non-correlation between the instruments and the error term. *** Significant at 1%, ** at 5% and * at 10%.