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Do emerging and developed countries differ in terms of sustainable performance? Analysis of board, ownership and country-level factors

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ABSTRACT

This paper aims to provide insights into the environmental, social and governance (ESG) performance of firms from emerging and developed countries relative to their control mechanisms and institutional framework. The main objective is to determine which of these board, ownership and country-level drivers exert the greatest explanatory power in ESG performance. In other words, this paper examines the behaviour of the board of directors, ownership and the effect of institutional pressure. Using a sample of 69 461 firm-year observations from 2012 to 2018, and following a two-stage analysis model, the results point to interesting findings for both blocks of countries. In emerging environments, the country effect prevails and the positive effect of the board of directors guarantees its efficiency, while in developed countries, the main mechanism affecting ESG performance is the board of directors, with the ownership effect also playing a key role.

1. Introduction

Corporate social responsibility (CSR) and sustainability issues are major topics, particularly in the context triggered by the Covid-19 pandemic. Knowing whether or not firms play an active role in terms of awareness and reacting correctly with regard to CSR and acting in accordance with Sustainable Development Goals (SDG) is currently one of the main subjects of research (e.g. [García-Meca and Martínez-Ferrero, 2021](#)). In fact, merely revealing CSR information to stakeholders has become a key strategic issue to consider when managing firms. Moreover, environmental, social and governance (hereinafter, ESG) issues are key aspects to consider ([Yoon et al., 2018](#); [Gunningham, 2009](#)).

ESG performance is of enormous interest to both emerging and developed countries (e.g. [Ye and Li, 2021](#)) as a strategic firm policy that meets shareholder and stakeholder demands in terms of socially responsible concerns. Furthermore, comparing the behaviour of both groups of countries – emerging and developed – is of even greater interest since certain differences between them are palpable, not only in terms of consequences but particularly vis-à-vis drivers. Yet, what factors determine the level of corporate ESG performance, and how can firms be motivated to satisfy ESG demands?

In this regard, and although most studies have been conducted within the framework of developed economies, ESG must also be analysed in developing countries. This is firstly because these countries are growing at a rapid rate, such that their development may

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harm the planet if not carried out in an orderly fashion, and secondly because emerging countries also display their own peculiarities, such as dangerous structural problems or political conflicts, which may damage business efficiency and growth.

When exploring the drivers of ESG, it should be highlighted that prior literature has shown that corporate governance is fundamentally linked to CSR and ESG performance (e.g. [Sundarasan et al., 2015](#); [Arora and Dharwadkar, 2011](#)). The different role played by institutional investors ([Martínez-Ferrero and Lozano, 2021](#)), as well as by institutional pressures such as the legal regulatory system ([Simnett et al., 2009](#)) or the key role of certain corporate governance issues such as the CSR committee, has even been evidenced in emerging countries ([Martínez-Ferrero et al., 2021](#)). However, to date there are no studies exploring the main corporate governance aspects which each group of companies (emerging or developed countries) focus more on. It is not known, for example, which corporate governance factors have a greater weight or influence on ESG performance and whether this weight behaves differently depending on the institutional context in which the two groups of countries operate. Additionally, most previous literature has merely focused on analysing the different control mechanisms from an individual perspective without examining them as a whole.

In this regard, it is necessary to reinforce the analysis of the main corporate governance drivers in order to increase current knowledge and understanding of this relationship, focusing on both blocks of countries. The main idea is to ensure firms' commitment through the use of corporate governance mechanisms in an appropriate manner, not only because this may mitigate potential conflicts but also because such mechanisms can prevent inefficient action, particularly from decision-making bodies. Therefore, a greater commitment to creating value is generated by both efficient behaviours and mechanisms that address and resolve differences of interests in the company. As [Martínez-Ferrero and Lozano \(2021\)](#) point out, this is an ideal tool since corporate governance brings together coexistence rules that regulate relationships between owners, management, and stakeholders.

Given the absence of previous research, this paper seeks to analyse how firms' ESG performance behaves by examining different corporate governance mechanisms, such as board of director behaviour, ownership and institutional pressures through a comparison between emerging and developed countries, and more specifically by exploring which set of factors exert the greatest explanatory power on ESG performance in each block of countries. To do this, this paper first explores the effect of each board, ownership and institutional factor on ESG performance. Second, we examine whether each driver behaves in the same way in each country or whether, by contrast, any of these factors exerts a greater weight on ESG performance.

For a sample of 69 461 firms located in emerging and developed economies during the period 2012–2018, we use a two-step methodology proposed by [Francis et al. \(2008\)](#), where a global model is first proposed to examine the effect of each driver on ESG performance. The predictive score of each set of factors is then regressed to examine whether board, ownership and institutional factors are weighted differently ([Francis et al., 2008](#)) and which offer the greatest explanatory power. Evidence provides interesting results about the predictive power of these factors depending on the nature of the country. In emerging firms, as expected, country-level factors exert the greatest impact on ESG performance, followed by the impact of board-level factors. However, in developed countries, the greatest explanatory power shifts to board-level factors, followed by the ownership effect. The main differences between the two blocks of countries is the key role played by the institutional factor in emerging countries; an essential role that does not hold in developed countries, where board and ownership factors are the most relevant vis-à-vis explaining ESG performance.

Answering the above research question, our paper contributes to the literature from different perspectives. First, we extend current knowledge of ESG performance drivers in developed, but particularly in emerging countries, by developing a research model that examines the relative importance of board, ownership and institutional drivers. We thus shed light on various aspects related to the different behaviour of companies in both groups of countries by analysing their differences in terms of board of directors, ownership and country-effects. In this respect, we can then discern which of these factors exert the greatest explanatory power on ESG performance in both emerging and developed countries. This paper contributes by comparing the impact of the board, ownership and institutional effect, depending on the firm's country of origin. In contrast to previous studies, we not only examine a specific or individual factor (e.g. the existence of a CSR committee), but also propose a global model where the level of ESG performance is explained by a set of governance mechanisms (board, ownership, and institutional).

This paper allows us to understand whether firms play a passive or proactive role in the current topics related to ESG performance with regard to the influence of certain board, ownership and institutional drivers, and further explores which of these factors prove to be most relevant in ESG performance. Additionally, this paper helps by defining the guidelines which developed countries have previously worked on, such that our work can aid with the development of emerging countries. Consequently, we contribute by offering guidelines to emerging companies about their possible future trends, since at the present time these firms are conditioned by other different elements that are not currently present in developed economies.

The remainder of the paper is as follows: [Section 2](#) sets out the theoretical aspects and research hypotheses, highlighting the drivers of ESG performance. [Section 3](#) explains the sample, the variables and research models. [Section 4](#) discusses the empirical results, while [Section 5](#) provides the paper's main conclusions.

2. Theoretical background and research hypotheses

2.1. ESG performance in emerging countries

Although the amount of research focusing on emerging economies has grown in recent years (e.g. [Visser, 2008](#); [Lau et al., 2016](#); [Munro et al., 2018](#); [Sahasranamam et al., 2019](#)), most studies into ESG have been carried out within the framework of developed economies, given that CSR action usually involves these countries ([Idemudia, 2011](#)). The limited evidence on developing countries requires further analysis that examines not only ESG performance in such countries but also its drivers at different levels. What is more,

the comparison between emerging and developed countries with regard to sustainability issues stems from the specific features of each block of countries.

Emerging countries evidence certain features which prove key when analysing aspects of ESG (Khan et al., 2013; Miras-Rodríguez et al., 2019). For example, their growth is very high and they display their own peculiarities -such as political conflicts. These are some of the reasons why the impact of social implications could be more significant (Ferrero-Ferrero et al., 2015; Li et al., 2016). In general, emerging countries pay little attention to CSR, which poses a serious problem at a global level. It is clear, for example, that public pressure concerning CSR disclosure in Brazil, Russia, India, China, and South Africa (BRICS) is not as great as in developed countries (Miras-Rodríguez et al., 2019; Ali et al., 2017), probably because firms in the former group of countries do not consider the need to invest in sustainable issues (Amini and Dal Bianco, 2017). Consequently, problems related to corruption, healthcare and wealth, education, transparency or inequality make corporate governance more relevant. Moreover, as Aracil et al. (2018) state, the development of CSR agendas is an opportunity to contribute to a win-win situation for both the corporation and the population as a whole.

In this context of growing concern about the level of ESG performance in emerging countries, it is crucial to further reinforce current understanding thereof, focusing on exploring the differences with respect to developed countries by examining the main corporate governance drivers. The principal reason for focusing on corporate governance is that it is considered as the set of co-existence rules which regulate relationships between owners, administrators, and stakeholders and is seen as an ideal tool to deal with conflicts of interest and ensure firms' commitment to ESG (Martínez-Ferrero and Lozano, 2021). Although they are still scarce in number and have failed to reach any consensus in the predicted relationship, certain previous studies have explored some of the drivers of firms' ESG performance in emerging countries, focusing mainly on internal governance mechanisms such as CSR committees or ownership concentration. As a result, there is undoubtedly a close link between corporate governance and ESG performance mechanisms, and this link clearly merits further enquiry. First, because prior literature has omitted several corporate governance mechanisms which ensure ESG commitment in emerging and developed countries, with the lack of studies addressing the latter group of countries being particularly evident. Second, because the scant previous studies to explore emerging countries have focused on examining certain drivers, but from an individual perspective without proposing a global analysis model. And third, because beyond examining ESG drivers in emerging countries, a comparison with developed countries is required in order to understand the behaviour of firms located in each group of countries.

When analysing ESG performance in emerging and developed countries, this paper focuses on the following three corporate governance elements which the literature has outlined: (i) board of directors; (ii) ownership; and, (iii) institutional development.

2.2. Drivers of ESG performance: board of directors, ownership, and institutional factors

2.2.1. Board of directors and ESG

Corporate governance, and in particular the board of directors, are key issues vis-à-vis achieving environmental, sustainable, and responsible goals (Harjoto et al., 2014; Raineri, 2018); the board of directors is the body charged with ensuring the satisfaction of the different stakeholders' demands regarding CSR issues (Rasche and Esser, 2006; Frías-Aceituno et al., 2012). Moreover, the board of directors is identified as one of the main mechanisms for ensuring ESG performance. Although no fully conclusive evidence has emerged concerning what effect board related issues might have (e.g. Gabriellsson, 2007), there is no doubt that a link to ESG performance does exist. Then, how does the board of directors influence firms' responsible behaviour? And its composition and structure?

Board of directors structure - in terms of board size, independence and diversity - can encourage companies to fulfil their social obligations and thereby guarantee a firm's long-term commitment (Michelon and Parbonetti, 2012). Certain features, such as board independence and diversity, size and whether a board has a CSR committee, prove decisive when analysing the functioning of the board of directors and its efficiency (Haniffa and Cooke, 2005). These aspects can be seen as determinants of the strength of the board (Martínez-Ferrero and Lozano, 2021).

With regard to board independence, most previous studies defend a direct and positive relationship based on the fact that non-executive directors add great value to company performance due to their independence from inside directors (Baysinger and Butler, 1985). Non-executives as independent directors tend to pay more attention to the interests of all stakeholders and to be more engaged in sustainability than executive directors (Coffey and Wang, 1998; Johnson and Greening, 1999). Similarly, Webb (2004) states that businesses with a higher percentage of independent directors on their board are more socially responsible.

Board diversity is another key aspect since it satisfies the needs of the different stakeholders (Harjoto et al., 2014) and can more easily reflect the diverse perspectives of its members. With regard to board diversity, some previous studies have examined the relationship between board diversity and CSR (e.g. Raineri, 2018; Rao and Tilt, 2015), defending the notion that heterogeneity in board composition in terms of training, interests, race and gender is a significant variable. This is because diversity not only takes into account the different interests and perspectives in the firm but also exerts a generally positive effect on CSR (Coffey and Wang, 1998). Studies such as those by Jo et al. (2012) and Lau et al. (2016) have clearly shown that board diversity has a positive effect on a firm's social responsibility. In this regard, some studies report that board gender diversity can have a positive effect on CSR practices and have shown that the presence of women on the board positively encourages CSR disclosure (Bear et al., 2010; Frías-Aceituno et al., 2012). Ferrero-Ferrero et al. (2015) clearly point to board gender diversity as a driver of CSR performance. The study of emerging countries is therefore of major importance, since firms in such countries usually operate in environments that are highly sensitive to prevailing and diverse religious, historical and cultural contexts (Visser, 2008).

Assuming the main recommendations of good governance codes, another relevant factor that improves board efficiency and strength is the creation of control committees. More specifically, creating CSR committees as specialized committees is key to implementing firms' CSR policies, monitoring and taking into account the relationships with stakeholders on the board of directors

(Peters and Romi, 2014; Fernández et al., 2011). The CSR committee plays a mediating role in the effect of board cultural diversity on CSR performance since it reflects a clear strategic point of view through its commitment to ESG performance (Fuente et al., 2017; Amran et al., 2014; Martínez-Ferrero and Lozano, 2021).

Finally, and as a traditional board aspect examined in prior literature, size is another issue on which previous studies have failed to reach a consensus. Osemeke (2011) and Frías-Aceituno et al. (2012) find a positive relation between board size and CSR practices. Conversely, other authors argue the possibility of incurring in more agency costs when board size increases due to the difficulty of establishing preventive corporate strategies (Kassinis and Vafeas, 2002; Jensen, 1993).

Most of the previous empirical evidence – both for developing as well as for developed environments - has supported the positive effect of the former control mechanisms on ESG performance associated to board strength. Building on the above, the proper functioning of the board of directors - the main internal control mechanism- is one of the principal aspects which most firms, whatever the nature of the environment they operate in, should look to when seeking to function efficiently. Considering that stronger boards are those which are larger, more independent and diverse and which possess a CSR committee, the following hypothesis is proposed:

H1: *ESG performance is higher in firms with stronger boards.*

2.3. Ownership and ESG

Following the agency theory, previous literature for developed countries contends that shareholders' main role is to monitor management (Jensen and Meckling, 1976; Esa and Zahari, 2016), although this obviously depends on ownership dispersion: the lower the ownership concentration, the greater the agency problems related to differences between shareholders and management (Fama and Jensen, 1983).

As regards CSR, management seems to be under greater pressure to reveal and disclose more information when ownership is not concentrated, such that it can legitimize its acts (Ntim and Soobaroyen, 2013). In this sense, and related to the institutional role - or simply to high ownership concentration - we see how concentrated owners tend to hinder certain CSR investments, particularly if they are not justified in terms of providing added value (Jain and Jamali, 2016). Enhanced ESG performance is thus to be expected when ownership dispersion is high, and vice versa; ESG performance will be poorer if ownership is concentrated. In the latter situation, there is less pressure on management, and ownership guarantees management control.

However, and taking in account the traditionally positive effect of ownership concentration, the main shareholders focus on long term value creation, which leads management to maintain and promote CSR decisions (Jain and Jamali, 2016; Barnett, 2007). For example, and although evidence related to the link between CSR and ownership is not conclusive for emerging countries, (Khan et al., 2013; Said et al., 2009; Haji, 2013), Miras and Di Pietra (2018) and Panwar et al. (2014), among others, find a positive relation when analysing the concentration of managerial ownership and family ownership, respectively. However, Miras-Rodríguez et al. (2019) establish certain differences with regard to ownership between developed and developing countries, and show the non-relevance of this variable for emerging countries, whilst a negative relation has been reported for Chinese firms (Zheng et al., 2014).

As regards the institutional ownership effect, as Matos (2020) states, few studies have explored the relationship between institutional ownership and ESG performance for developing economies. Among the scarce number of previous studies, some have been carried out in the framework of developed countries, with mixed results having been obtained (Harjoto et al., 2017; Oh et al., 2017; Arora and Dharwadkar, 2011, among others). The key point is to identify the motivations of this type of investment which, a priori, must focus on the long term (Erhemjants and Huang, 2019). However, this investor profile sometimes also pursues other interests and goals. Thus, institutional ownership may be biased towards ESG reporting, depending on its sensitivity or resistance to its pressure (Almazan et al., 2005; Pucheta-Martínez and Chiva-Ortells, 2018), and ESG performance will depend on the motivations and commitment of institutional investors (Dam and Scholtens, 2013; Harjoto et al., 2017). For emerging firms, Martínez-Ferrero and Lozano (2021) thus state that when institutional investor ownership is low, differences in alignment with the rest of the investment may exist with regard to aspects such as propensity to control management concerning ESG issues. In this situation, the presence of institutional investors is negatively associated with ESG performance (Pucheta-Martínez and Chiva-Ortells, 2018; Chava, 2014).

From the above, the second hypothesis is formulated as follows:

H2: *ESG performance is higher when ownership concentration is higher and when the role of the institutional investors is lower.*

2.4. Institutional framework and ESG

Analysing the effect of the institutional framework and the context in which a business operates is closely related to the ways in which governing bodies make decisions (Suárez and Belk, 2017) and with stakeholders' different demands (Figar and Figar, 2011), which proves particularly relevant in the context of emerging and developed economies.

The relevance of the country's governance system is clear. A priori, corporate governance mechanisms are less effective if this system is not as strong as it should be (Claessens and Yurtoglu, 2013). At the same time, country specific effects may affect decisions related to sustainability reports. The previous statements are based on the institutional theory: firms can act in different ways with regard to CSR decisions depending on the social environment in which they operate (Meyer and Rowan, 1977). Therefore, depending on how weak the legal system is, the effect on ESG performance will vary.

Based on the seminal work of La Porta et al. (1997), several studies have explored differences in the level of investor protection in terms of the two main legal systems: common and civil law. In this respect, in countries with a common law system, investors are usually better protected because firms focus on creating shareholder value (La Porta et al., 1998). Does the legal system of the country

therefore influence the level of ESG performance?

A complementary effect between the level of investor protection associated to the legal system and ESG performance may well also be feasible from a wider perspective: a stronger and more committed legal system urges all company members to focus on maximizing firm value. Thus, the positive relationship between a robust legal system and ESG performance is justified, since said system exerts a complementary effect by helping good corporate practices vis-à-vis social and environmental aspects (Chih et al., 2010). Ntim and Soobaroyen (2013) also state that firms which enjoy strong governance are more socially responsible, while Miras-Rodríguez et al. (2019) claim that institutional-level corporate governance mechanisms determine CSR disclosure practices in BRICS countries. As for economic development, in general, prior literature also argues that reporting practices are higher in developed countries (Jensen and Berg, 2012) as a result of their associated costs (Neumayer and Perkins, 2004), which might limit the disclosure policies of firms located in less developed countries. The above reasoning is also reinforced by the positive relationship that some previous studies have reported between the economic development of the country of origin and the level of the firm's socially responsible commitment (e.g. Baughn et al., 2007).

However, it must be recognized that most previous empirical papers discussing the disclosure of voluntary information state that the focus on stakeholders is high in countries with a civil law system, thus mitigating the potential conflict between shareholder and stakeholder (Deffains and Guigou, 2002). The civil law system pays greater attention to issues related to ESG performance (Frías-Aceituno et al., 2013). From this perspective, ESG investments constitute a substitution mechanism that emerges when the legal enforcement system is poor and not effective enough (Choi and Wong, 2007). Thus, the stronger the institutional legal system and economic development, the lower the level of ESG performance.

Following on from the above, the following hypothesis is proposed:

H3: ESG performance is higher in poor institutional legal systems and when there is lower economic development.

Proposing the three research hypotheses stated above, and in an effort to identify and test these potential drivers of ESG performance in emerging and developed countries, we conduct an in-depth analysis of the relative importance of each driver. In particular, we consider three key questions: Do the different board, ownership and institutional drivers exert equally weighted influences on the level of a firm's ESG performance? If not, which factor exhibits the greatest power to explain why companies are strongly committed to increasing their ESG performance? Is there any difference in the non-equal weight of each driver between emerging and developed countries?

3. Method

3.1. Sample

We create a sample from the information provided by Thomson Reuters Eikon, as follows. First, we restricted the sample to publicly listed firms worldwide, classifying the full sample in firms located in emerging and developed countries during the period 2012–2018. We then removed duplicated firm-year observations. After this, we removed firm-year observations that were missing any information on ESG performance, since this was the main focus of the research. Finally, the sample consisted of 17 318 emerging and 52 143 developed observations, giving a final sample of 69 461 firm-year observations spanning 2012–2018.¹

3.2. Variable measures

3.2.1. ESG performance

ESG performance is measured using the ESG score (ESG) obtained from Thomson Reuters Eikon (Cheng et al., 2014; Sassen et al., 2016; Garcia et al., 2017). This score measures firms' ESG performance based on public information data, taking into account comparability, data availability, and industry relevance. The ESG score embraces ten categories (resource use, emissions, innovation, management, shareholders, CSR strategy, workforce, human rights, community, and product responsibility) weighted proportionately according to the three pillar scores (environmental, social, and governance). ESG ranges from 0.1 to 100, based on the above ten categories' data points that Thomson Reuters Eikon assigns.

3.2.2. Board-level factors

As board-level factors, we include the following: **BoardSize** as the total number of board members (Lanis and Richardson, 2018; Ye and Li, 2021); **CSRCom** as a dummy variable coded 1 if the firm has a CSR committee, and 0 otherwise (Godos-Díez et al., 2018); **BoardGenderDiv** as the percentage of female directors out of the total number of directors on the board (Martínez-Ferrero and Lozano, 2021; Martínez-Ferrero et al., 2021); and, **BoardIndep** as the percentage of independent directors out of the total number of directors on the board (Godos-Díez et al., 2018; Ye and Li, 2021).

¹ This sample period is fundamentally motivated given the methodology we further explain – panel data- on the data availability during several continued years and coming/originated from the most number possible of countries. The period starts on 2012, being considered one the years when firms generalize the ESG strategy in their business at global level, both in emerging and developed countries. The period ends on 2018 as the last year where availability of information is not compromised.

3.2.3. Ownership-level factors

Institutional ownership (**IO**) is measured as the percentage of shares held by strategic institutional holdings, using the ratio of the sum of shares held by all institutions for each firm to total shares outstanding (Harjoto et al., 2017; Martínez-Ferrero and Lozano, 2021). Free float (**FF**) measures the percentage of shares held by a company that are available to the public for trading in the secondary market.

3.2.4. Country-level factors

As country-level factors, **CommonLaw** is the dummy variable, which is coded 1 if the firm is located in common law countries, and 0 otherwise (civil law countries) (Martínez-Ferrero and Lozano, 2021). Since it is essential to have additional control for the institutional factor, we also use the change in gross domestic product **GDPGrowth** as an institutional control variable because this is a fundamental factor to be analysed when referring to the development of the institutions in each country.

3.2.5. Control variables

Finally, some control variables are included in order to avoid biased results (Martínez-Ferrero and Lozano, 2021; García-Meca and Martínez-Ferrero, 2021). In this regard, we include **Size** as the natural logarithm of total assets; **MTB** as the market-to-book ratio; **RiskLeverage** as the ratio of total debt to total equity plus total debt. We also control for year and industry dummy variables.

3.3. Research model

Our regression models are projected and examined using an international sample made up of 69 461 firms during the seven-year period 2012–2018: that is, using a sample composed as panel data that combines the time series with a transversal data set. Regression models are examined for a panel data set that enhances the consistency and explanatory capacity of the regression analysis, offering more informative data, greater variability and, what is more, controls on unobservable heterogeneity.

As regards the analysis technique, our regression models are estimated using the Tobit regression as a statistical model that provides efficient and consistent estimates of coefficients for censored variables (López-González et al., 2019), as the dependent variable, **ESG**, coding in the range 0.1–100. Application of the Tobit estimator takes into account that the ESG variable is left- and right-side censored.² Using the maximum likelihood method, Tobit models provide efficient, consistent estimates of coefficients, because when the likelihood function is maximized, it incorporates information from both censored and uncensored observations (García-Sánchez and Martínez-Ferrero, 2018). The basic Tobit model supposes that there is a latent variable that can be explained by observable variable(s).

This paper aims to explore the impact of board, institutional and ownership-level factors, although the work's main contribution is to examine which of these factors exert the greatest explanatory power on ESG performance in emerging and developed countries. Are there any differences in the predictive power of these drivers between the two blocks of countries? To answer the above research question, we employ the two-stage model proposed by Francis et al. (2008) as follows. In the first step, and for each block of countries (emerging and developed), we regress ESG performance on board, institutional and ownership factors as well as certain control variables as follows:

$$ESG_{it} = \beta_0 + \beta_1 BoardSize_{it} + \beta_2 CSRCom_{it} + \beta_3 BoardGenderDiv_{it} + \beta_4 BoardIndep_{it} + \beta_5 \frac{IO}{FF} + \beta_6 CommonLaw_{it} + \beta_7 GDPGrowth_{it} + \beta_8 Size_{it} + \beta_9 \frac{MTB}{it} + \beta_{11} RiskLeverage_{it} + \mu \quad [Model 1].$$

In the second step, we adopt a two-stage model (Francis et al., 2008, 2011) to analyse the interplay of board, ownership and institutional drivers in determining the ESG performance of firms located in emerging and developed countries. Thus, we can test whether board, ownership and institutional factors are weighted differently (Francis et al., 2008) and which offer the most explanatory power. The predicted value for each observation in Model [1] is based on the board, ownership and institutional drivers, denoted **Board Score**, **Own Score**, and **Inst Score**, respectively.

By adding these scores to a second-stage model, we examine which of them offers the greatest predictive capacity in ESG performance for each block of emerging and developed countries as follows:

$$ESG_{it} = \beta_0 + \beta_1 Board\ Factor_{it} + \beta_2 Own\ Factor_{it} + \beta_3 Country\ Factor_{it} + \beta_4 Size_{it} + \beta_5 \frac{MTB}{it} + \beta_6 RiskLeverage_{it} + \beta_7 Industry_{it} + \eta + \mu \quad [Model 2].$$

If β_1 , β_2 , and β_3 are not equal, some factors exert different effects and explain the firm's ESG performance in each emerging and developed country to a greater or lesser extent than the other factors.

² Although the Tobit estimator take into account the specific characteristics of the dependent variable, it sets aside other relevant issues, such as possible endogeneity. Under the possible existence of endogeneity problem, the GMM estimator can be the best choice, where endogeneity is an intrinsic problem, because of the two-way relationship between board, institutional and ownership-level factors and the ESG performance. The endogeneity issue that exists when changes in the dependent variable change the value of at least one of the covariates (reverse causation). In order to ensure the robustness of our evidence and solve the possible risk of endogeneity in the proposed regression models, we employ the GMM estimator in order to guarantees that this problem is controlled. Results are robust by employing the two-step GMM estimator proposed by Roodman (2009) and are available upon request.

4. Empirical results and discussion

4.1. Descriptive statistics

Table 1 shows the descriptive statistics (Panel A) and bivariate correlations (Panel B) by analysing emerging and developed markets separately. It should be noted that the differences can be substantial in terms of differences in some variables. When exploring the mean values in our sample, ESG performance is seen to be very similar for both blocks of countries, with an average value of around 52 within a possible range of 0–100. Broadly speaking, firms from emerging/developed countries are committed to ESG issues, although greater commitment is still needed in this regard. Furthermore, it can also be seen that commitment to CSR-related practices in developing countries is no lower than in developed countries. Consequently, this result does not concur with Miras-Rodríguez et al. (2019), Ali et al. (2017) or Amini et al. (2017).

However, the factors determining this ESG performance do reveal certain differences between emerging and developed countries. As regards board variables, mean values are similar, with the greatest differences appearing in board gender diversity (11% in emerging vs. 16.24% in developed). This result is consistent with the more poorly developed social rights in these latter economies (Branisa et al., 2013; Visser, 2008). However, this also highlights the need to continue making progress and to fight for equal opportunities in emerging countries, a struggle which, given the average percentages, is not overlooked in developed countries. The existence of a CSR committee is another board factor that differs depending on the nature of the country. In this regard, around 58% of the boards of firms located in emerging countries have a specialized CSR committee, a mean value that decreases to 49% in developed countries.

As regards ownership drivers, the differences between emerging vs. developed countries should be highlighted. Specifically, ownership dispersion is higher for the developed sample – free float for the emerging group vs. the developed block is 0.52 and 0.75, respectively – from where, a priori, we might sense a greater potential conflict between shareholders and management in developed countries. The higher values for the developed sample also remains for the case of institutional investors, where ownership displays a mean value of 0.49 and 0.23 for emerging and developed groups, respectively.

With regard to the institutional framework, in developed countries the common law system is stronger – 0.31 in emerging vs. 0.49 for developed countries – and the change in GDP is higher for the emerging sample, as expected (3.75 versus 1.37). This may be explained by the high growth rate of emerging economies.

As far as the control variables are concerned, average size and leverage is similar for both blocks of countries, while the market to book value for emerging countries is much higher than for developed ones. This probably reflects the good investment opportunities available in developing countries –coupled with their high growth. Table 1 also shows the bivariate correlations in Panel B, where no high values are reported, thus reflecting the lack of any multicollinearity problems among the variables in our regression models.

4.2. Empirical results

Table 2 and Table 3, respectively, show the effect of board, ownership and institutional-level factors on ESG performance and the results of the score model vis-à-vis predicting which factor exerts the greatest weight in explaining ESG performance in each group of countries.

In emerging countries, the following interesting results are obtained. With regard to board aspects, evidence supports hypothesis 1 by showing the positive effect of board gender diversity (coef. 0.139, $p < 0.01$), independence (coef. 0.125, $p < 0.01$) and the existence of a CSR committee (coef. 14.478, $p < 0.01$) on ESG performance. Supporting hypothesis 1, greater independence, diversity and the existence of a CSR committee leads to higher sustainability performance of firms located in emerging countries.

As for ownership factors, evidence supports the negative effect of institutional ownership (coef. –11.073, $p < 0.05$) and free float (coef. –11.264, $p < 0.05$) on the ESG performance of emerging countries. As proposed in hypothesis 2, ESG performance is higher when ownership concentration is higher and when the role of the institutional investors is lower.

Finally, regarding institutional factors, the level of economic development associated to the GDP variable is not significant, with the level of investor protection in the country being the institutional factor that exerts a direct relationship with ESG performance. In detail, results support hypothesis 3 by revealing the negative impact of the common law system on ESG (coef. –5.211, $p < 0.01$). In other words, the results support the notion that ESG performance in emerging countries is higher in poor institutional legal systems.

In developed countries, results are very similar to those found for emerging countries. We could well think that the parallelism in the functioning of the control mechanisms in both groups of companies can be explained by the spillover effect of our sample period 2012–2018 where phenomena such as the globalization, growth of socially responsible investing and the contagion effect have been clearly present in the markets (see Umar et al., 2020; Gabriel et al., 2021 or Akhtaruzzaman et al., 2021).³ However, the main difference is the lack of any effect of country-level factors. Specifically, results confirm the positive effect of board gender diversity (coef. 0.183, $p < 0.01$), independence (coef. 0.117, $p < 0.01$) and the existence of a CSR committee (coef. 13.468, $p < 0.01$) on ESG performance. Thus, except for board size, stronger boards are seen to be a governance mechanism that ensures enhanced ESG performance in developed countries.

³ Thus, from a perspective of financial markets, Umar et al. (2020) analyse the relationship between most significant ESG leader equity indices where it seems that the contagion effect goes from developed markets to emerging markets and being especially relevant in the crises periods, with the consequent effect on the risk and diversification phenomena.

Table 1
Descriptive statistics.

Panel A. Mean and standard deviation of variables used in regressions						
	Full Sample		Emerging		Developed	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
ESG	52.14	18.11	52.06	17.96	52.16	18.15
BoardSize	10.12	3.37	10.54	3.62	10.03	3.31
CSRCom	.50	.49	.58	.49	.49	.49
BoardGenderDiv	14.89	13.75	11.00	10.93	16.24	14.36
BoardIndep	45.33	24.26	44.70	17.74	45.58	26.38
IO	.30	.25	.49	.22	.23	.23
FF	.69	.26	.52	.25	.75	.23
CommonLaw	.45	.49	.31	.46	.49	.50
GDPGrowth	2.00	1.84	3.75	2.42	1.37	1.01
Size	21.25	2.06	21.07	2.035	21.31	2.06
MTB	-67.21	21.817	18.16	17.798	-94.40	25.030
RiskLeverage	.35	2.55	.34	1.11	.35	2.87
N=			17 318		52 143	

Panel B. Bivariate correlations between variables used in regressions										
	1	2	3	4	5	6	7	8	9	10
ESG	1.000									
BoardSize	0.2211	1.000								
CSRCom	0.5742	0.2448	1.000							
BoardGenderDiv	0.2816	0.0240	0.1273	1.000						
BoardIndep	0.2969	-0.1837	0.1231	0.4128	1.000					
IO	-0.0358	0.0580	0.1040	-0.1169	-0.2758	1.000				
FF	0.0887	-0.0673	-0.0230	0.0935	0.2223	-0.9446	1.000			
CommonLaw	-0.0800	-0.1686	-0.1405	0.1199	0.3148	-0.3136	0.2635	1.000		
GDPGrowth	-0.0710	0.0054	-0.0743	-0.1396	-0.0513	0.2835	-0.2803	0.0192	1.000	
Size	0.3906	0.4509	0.2978	0.0202	-0.0358	-0.1861	0.1977	0.0445	-0.0423	1.000
MTB	0.0027	-0.0004	0.0067	0.0251	0.0372	-0.0040	-0.0043	-0.0036	0.0010	-0.0219
RiskLeverage	0.0144	0.0220	0.0103	0.0009	-0.0032	-0.0417	0.0152	0.0053	0.0013	0.0255

Sample: 69 461 firm-year observations in 2012–2018

Table 2
Regression analysis – first stage model -.

	Model [1] Emerging		Model [1] Developed	
	Coef.	Std. Err.	Coef.	Std. Err.
BoardSize	.009	.1744	.159	.105
CSRCom	14.478 ***	1.232	13.468 ***	.651
BoardGenderDiv	.139 ***	.046	.183 ***	.0212
BoardIndep	.125 ***	.034	.117 ***	.0150
IO	-11.073 **	4.826	-18.646 ***	3.431
FF	-11.264 **	5.019	-12.127 ***	3.332
CommonLaw	-5.211 ***	1.459	-.792	.664
GDPGrowth	-.062	.207	-.350	.436
Size	2.292	.237	2.297	.161
MTB	.174	.060	-.003	.006
RiskLeverage	-.763	1.704	-1.342	.788
Industry	-.006	.024	.030	.015
Wald test	12 273.10		38 624.68	
Controlled by year and industry				
sigma_u	.004	1629.47	3.84e-06	2.041
Prob > chi2				
sigma_e	12.99 ***	.621	13.228 ***	.210
Rho	9.69e-08	.0780	8.42e-14	8.96e-08
N =	17 318		52 143	

Significance levels: * p < .10; ** p < .05; *** p < .01

Sample: 69 461 firm-year observations in 2012–2018

Significance levels: * p < .10; ** p < .05; *** p < .01

Similarly, evidence again supports the negative effect of institutional ownership (coef. -18.646 , $p < 0.01$) and free float (coef. -12.127 , $p < 0.05$) on the ESG performance of developed countries, again supporting our hypothesis 2. In developed countries, a greater presence of institutional investors and a lower level of ownership concentration leads to lower ESG performance.

As the main difference compared to emerging countries, none of the institutional factors examined (legal system and economic development) appear to be determinants of ESG performance in developed countries. That is, in developed countries results support

Table 3
Regression analysis – second stage model.

	Model [2] Emerging		Model [2] Developed	
	Coef.	Std. Err.	Coef.	Std. Err.
Board Factor	.592 ***	.457 637	.607 ***	.024
Own Factor	.159	.186	-.191 ***	.061
Country factor	-.719 ***	.183	.001	.0144
Size	3.322 ***	.303	1.778 ***	.150
MTB	.242***	.062	-.003	.006
RiskLeverage	-.922	1.723	-1.321 *	.821
Industry	.021	.025	.0239	.016
Wald test	Prob > chi2 = 0.000		Prob > chi2 = 0.000	
Controlled by year and industry				
σ_u	2.73e-09	7905.111	.000	2538.572
σ_e	13.153 * **	.363	13.820 ***	.219
Rho	4.30e-20	2.49e-07	6.56e-12	.0009

N = 1 731 852 143

Sample: 69 461 firm-year observations in 2012–2018

Significance levels: * $p < .10$; ** $p < .05$; *** $p < .01$

the idea that ESG performance is not influenced by the legal system and the economic development of the environment in which firms operate. These results are likely a consequence of the greater number of firms found in common-law legal systems in developed compared to emerging environments, which makes sense given that firms in developed countries do not need legal protection. As a result, the legal system is not a determinant of ESG performance.

From the above evidence, both in emerging and developed countries, results confirm the positive effect of board strength on the development of CSR issues. This evidence supports previous studies that positively associate board diversity with ESG performance (e.g. Bear et al., 2010; Frías-Aceituno et al., 2012; Ferrero-Ferrero et al., 2015), board independence (e.g. Webb, 2004), and the existence of a CSR committee (e.g. Peters and Romi, 2014; Fuente et al., 2017; Amran et al., 2014; Martínez-Ferrero and Lozano, 2021). All of the above studies agree in evidencing the positive influence on CSR commitment of firms characterized by stronger boards of directors.

Moreover, for both environments, institutional ownership and lower concentration negatively impact ESG performance. In line with Ntim and Soobaroyen (2013) and Zheng et al. (2014), results confirm the negative relationship between ownership dispersion and the level of ESG performance. That is, as pointed out by Jain and Jamali (2016) or Barnett (2007), ownership concentration acts as a good control mechanism that will encourage shareholders to become more intensely involved with the company and to behave as active investors. Under lower ownership concentration, management feels under greater pressure from other agents of the firm to undertake sustainable actions so that it can legitimize its action (Ntim and Soobaroyen, 2013; Pucheta & Chiva-Ortells, 2018; Chava, 2014). Additionally, this concentration proves relevant when there are no institutional interests. In an effort to shed further light on the thus far unresolved debate, results also confirm that the greater the institutional ownership, the lower the ESG performance (Pucheta & Chiva-Ortells, 2018; Chava, 2014).

The main evidence to come out of the paper shows that the institutional-level factors associated with the legal system are only an ESG driver in emerging countries, and are closely influenced by the external pressures of the environment in which the firm operates. The above result concurs – although without comparing developed and developing countries – with the previous evidence of Deffains and Guigou (2002) or Frías-Aceituno et al. (2013). That is, ESG performance is greater when the institutional framework is based on a civil law legal system. This confirms the substitutive effect this system has on ESG performance in emerging countries. This performance is therefore greater in inefficient legal enforcement systems (Choi and Wong, 2007); civil law systems address CSR issues better by mitigating the potential conflict between shareholder and stakeholder. In this case, the manager feels motivated by ESG investments more than by the costs attributed to them from a shareholder perspective. In addition, this situation is particularly evident in emerging countries, due to the need to invest in social issues in countries that display little commitment to sustainable subjects (Amini et al., 2017).

Further analysis is reported in Table 3, which shows the empirical results of the two-stage regression model that aims to examine whether board, ownership and institutional factors have a major impact on ESG performance in emerging and developed countries. To do this, ESG performance is regressed on the predictive scores of board, ownership and institutional factors of previous Model 1. In emerging countries, results confirm that board and country-level factors exert the greatest explanatory power on the ESG of firms located in developing countries (coef. 0.592, $p < 0.01$; coef. -0.719 , $p < 0.01$, respectively). That is, board and country drivers are the most relevant in explaining the level of ESG performance in emerging countries. Yet, do they display the same power? In order to examine the predictive power of each factor, we test each coefficient according to the Wald statistic, with the null hypothesis that all coefficients are equal. The test is significant ($p < 0.01$); thus, the null hypothesis of equality can be rejected, and we confirm the unequal weights of these coefficients. Differences between coefficients indicate that country-level factors are weighted relatively more heavily than board factors for explaining the firm's ESG in emerging countries (0.719 for country and 0.592 for board factors). Specifically, country drivers are weighted 21.45% more heavily than board factors ($((0.719/0.592 - 1) \times 100)$). In turn, we can conclude that the greatest weight on ESG is exerted by factors linked to the country factor, although the board-factor continues to have a positive impact, exercising its role as an efficient control mechanism for ESG performance.

Consequently, and as a result of the structural characteristics of these countries, we can assert that the legal system plays a more relevant role in emerging countries. That is, in emerging environments and when the legal system is stronger, management feels no motivation to engage in ESG policies. In contrast, the effort and interest are clear in the framework of poor protection, which will undoubtedly be exacerbated in developing markets. It should also not be forgotten that in emerging environments, another key control mechanism in achieving greater ESG performance is linked to efficient board action.

As regards developed countries, results confirm that board and ownership-level factors exert the greatest explanatory power on the ESG of firms located in developed countries (coef. 0.607, $p < 0.01$; coef. -0.191 , $p < 0.01$, respectively). That is, board and ownership drivers are the most relevant in explaining the level of ESG performance in developed countries, supporting the lack of significance of country factors, which is the main difference compared to emerging countries. As regards the ownership effect, shareholders are driven by long term wealth creation in developed countries, which supports decisions in terms of management CSR.

Moreover, the Wald statistic is significant ($p < 0.01$). The null hypothesis of equality can be rejected, and we confirm the unequal weights of these coefficients. Differences between coefficients indicate that board-level factors are weighted relatively more heavily than ownership factors for explaining the firm's ESG in developed countries (0.607 for board, and 0.191 for ownership factors). Results for developed countries allow us to conclude that the ownership concentration effect in developed countries proves key, but that the greatest predictive power corresponds to board-level factors. The greater explanatory effect of the board is not surprising since the board of directors is the major fundamental internal mechanism of good governance.

Differences in the relative weight of ESG drivers in emerging and developed countries could be explained by the following arguments. First, our results confirm the substitutive effect that exists between the strength of the legal system and ESG performance. As the legal system becomes increasingly weak and unable to afford legal protection for investors, the level of ESG performance is greater and seeks to solve the potential conflict between stakeholders and investors. In this situation, management is not conditioned by the cost of new investment in ESG. Moreover, management would feel drawn to invest in ESG policies, particularly, as a result of the institutional pressures exerted in the country where it is located. In addition, the substitutive effect is especially justified in the framework of developing economies with weak protection, since these countries are highly sensitive to internal conflicts and unstable policies. Second, concerns about CSR issues have continued to increase in recent years in developed countries. However, it should be highlighted that other governance mechanisms exert a greater influence on ESG performance, given that sustainability issues are already far more institutionalized than in emerging countries. The main difference in the pre-eminence of institutional or board drivers in emerging and developed countries, respectively, corresponds to the level of institutional and country pressures of each country as well as to the internal governance pressures exerted by stronger boards of directors in developed countries which, at least in part, do not respond to coercive pressures.

On a final note, it should be highlighted that although some authors such as [Fan et al. \(2011\)](#) point to differences between emerging and developed countries in the roles played by board members, our results also show that stronger boards function equally well in both contexts. However, ownership as a governance mechanism only serves as an active and efficient mechanism for companies in developed environments, where ownership dispersion is higher.

One possible reason underlying the predictive power of the ownership factor in developed compared to emerging countries is that ownership concentration is higher in emerging countries. As a result, the ownership effect plays a more active role than in developed countries. Consequently, in developing countries it is necessary to consider the pressures, goals, sensitivity or merely the motivations behind institutional investment with regard to the implementation of ESG activities ([Almazan et al., 2005](#); [Pucheta-Martínez and Chiva-Ortells, 2018](#); [Dam and Scholtens, 2013](#); [Harjoto et al., 2017](#)).

5. Conclusions

This research draws on an international sample of 69 461 firm-year observations from 2012 to 2018 in order to examine differences in firms' ESG performance between emerging and developed countries focusing on a set of board, ownership and institutional drivers. This paper also proposes an in-depth analysis of the relative importance of each driver by examining whether board, ownership and institutional drivers exert equally weighted influences on the level of a firm's ESG performance in each block of countries.

Empirical evidence obtained from the use of the two-stage model proposed by [Francis et al. \(2008\)](#) provides insights on various aspects related to the different behaviour of companies in emerging and developed countries. From the global model, results allow us to support the positive effect of board strength (the existence of a CSR committee and greater board gender diversity and independence), the negative effect of institutional and dispersed ownership, and the negative impact of a poor legal system on ESG performance in emerging countries. Results are similar in developed countries, although no significant effect of institutional-level factors is apparent.

When analysing the relative weight of each set of drivers, results again provide differences depending on the nature of the country. Specifically, while in emerging countries the institutional factor exhibits the greatest power to explain why companies are more committed to increasing their ESG performance, in developed countries the greater weight in the influence on ESG performance corresponds to the board of directors. As expected, ESG and sustainability issues in developed countries are already far more institutionalized than in emerging countries.

In line with the above, this paper contributes to prior literature by further reinforcing current understanding of the ESG performance of firms located in emerging countries whilst at the same time comparing said performance with developed countries. Previous studies focused on a general examination of certain factors of ESG performance for developed countries, yet failed to provide a comparison between emerging and developed countries and to analyse a set of individual factors (for example, those related to board of directors' characteristics). In this regard, the empirical evidence to emerge from this paper expands current knowledge concerning

what motivates firms to reinforce their ESG performance in both developing and developed countries. This paper may help to offer guidelines to policies and regulators on the different treatment they must follow in each context; for instance, depending on whether the institutional framework is emerging or not, the level of investor protection associated to a civil or common law system, the strength of the board of directors, and ownership concentration.

Overall, we contribute by enhancing present knowledge of these emerging countries, whilst also offering a comparison with a sample in the same period for developed countries, thereby filling an unexplored gap and furthering our understanding of which factors promote ESG performance in emerging and developed markets. Although previous studies on social and environmental issues have focused on the USA, the UK as well as Asian and European countries (Ferrero-Ferrero et al., 2015; Li et al., 2016), an analysis of both environments has thus far not been undertaken. Therefore, our contribution also further explores behaviours and differences concerning what role firms play by analysing board of directors activity, ownership and country-effect related to ESG performance.

In addition, and given that most recent research on CSR has focused on developed countries, one of the main contributions of this study is the added value of assessing the implications of board composition, ownership and institutional development in firms located within emerging economies, where sustainability and corporate governance practices can help boost their development. Examining these countries can help to further current knowledge of emerging economies which are gradually becoming more sensitive to the impact that ESG issues exert on their development. Therefore, when taking their decisions, policy-makers should consider the special relevance of the institutional development effect in developing economies.

This paper also has some limitations. One initial limitation concerns the difficulty involved in using alternative methods to measure sustainability performance. Future research might focus on examining additional measures of sustainability strategies, taking into account the individual effects exerted by ESG-related variables or even on analysing the effect of these three devices on the market prices. Moreover, additional variables should be analysed in order to gain deeper insights into other different aspects related to corporate governance, such as management compensation or directors' ownership, since management interaction might enhance or limit this issue. Other of the limitations of our study is that the period of analysis comprising 2019 and 2020 is not considered. These are years in which the ESG performance increased significantly both in developed and even more in emerging countries. Future studies should not only increase the analysis period, at least until 2020, but should also try to extract all the available information used in this paper for a larger number of companies located in more countries (thus obtaining more generalizable results). In this respect and finally, and given the relevance of the country effect outlined, future inquiry should explore the generalization or otherwise of these results in frameworks that display more similar characteristics (industrial, geographical, etc.) and examine the effect of these specific factors on ESG performance.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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