



The impact of institutional and social context on corporate environmental, social and governance performance of companies committed to voluntary corporate social responsibility initiatives



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ABSTRACT

Using a Neo-institutional framework, this paper discusses the role of national-specific social, cultural, legal, regulatory and economic differences when determining the way that companies committed to a specific voluntary corporate social responsibility (CSR) initiative operate in different sustainability dimensions. The differences between companies' environmental, social and governance (ESG) performance of the companies operating in the three countries with highest number of firms committed to the United Nations Global Compact (UNGC) –Spain, France and Japan– is assessed through a multidimensional HJ-Biplot technique, which is a statistical technique that provides a joint graphical representation in a low dimensional Euclidean space (usually a plane), of a multivariate data matrix. This research contributes to the existing literature providing quantitative evidence of how different country-specific social and institutional schemes influence companies' ESG performance. The main results reveal the existence of two clusters of companies behaving in different ways with regard of sustainability issues. First, Spanish and French companies exhibit similar levels of social and corporate governance performance, higher than those of Japanese firms. Second, Japanese firms seem more committed to environmental issues than Spanish and French companies. These results confirm that the different countries, with different institutional backgrounds, induce different priorities among their firms, in terms of ESG performance, even under a common commitment to the same principles of adopted CSR initiative.

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1. Introduction

Awareness of environmental, social and governance (ESG) concerns has increased, both at institutional and corporate level (Campbell, 2003), prompting an exponential increase in the volume of voluntary corporate social responsibility (CSR) initiatives and codes of business conduct (Rasche, 2009). In general, these initiatives were designed to help organizations implement strategies, principles or indicators that reflect a CSR or sustainable development philosophy. Various instruments have been proposed by national and international organizations, companies, private

associations and non-governmental foundations and organizations (e.g. European Commission, 2004; Organisation for Economic Co-operation and Development (OECD, 2001)). The United Nations Global Compact (UNGC), first presented at the 1999 World Economic Forum, constitutes the most expansive voluntary CSR initiative in the world (Kell, 2013; Rasche et al., 2012). Since its launch, it has drawn attention from organizations worldwide and attracted more than 12,700 participants. According to data published by the United Nations Global Compact Office (UNGCO, 2013), Spain, France and Japan are the countries with the greatest number of participating organizations.

Some research has been focused on determining the companies' reasons of adopting the UNGC (Byrd, 2009; Cetindamar and Husoy, 2007; Janney et al., 2009; Runhaar and Lafferty, 2009), highlighting the following motivations: (1) companies' commitment to act ethically (e.g. engage in sustainable development, be a good

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corporate citizen); (2) companies' efforts to improve their image, access foreign markets or stand out from competitors; and (3) in response to stakeholder and institutional pressures or to increase customer satisfaction. However, little research investigates whether UNGC adoption actually stimulates companies' environmental (CEP), social (CSP) or governance (CGP) performance. Nor do any studies indicate whether national-level codes of conduct, norms, stakeholder pressures or other institutional effects influence CSP, CEP and CGP, in terms of the scope of countries' commitment to the UNGC.

This study therefore seeks to advance the emerging field of sustainability performance management and measurement by addressing ESG performance issues pertaining to corporate management in general and corporate sustainability management in particular. We aim to enhance UNGC literature by analysing the differences in CSP, CEP and CGP across three countries, all of which feature many companies committed to the UNGC (i.e. Spain, France and Japan). This research aims to mitigate some of the limitations found in previous research in the field. Firstly, previous works on the topic only analyse the corporate performance on one or two dimensions of companies' ESG performance. The present research overcomes this limitation and offers a more complete picture of the companies' performance into the three aforementioned dimensions. Secondly, most of the papers on this topic offer a static picture of companies' ESG performance of those firms committed to the UNGC because the use of databases comprising only one or two periods. Our research overcomes this limitation by using an impressive sample of eight years (from 2005 to 2012). More interestingly, the sample time-span covers periods of economic growth in the three analysed countries and controversial periods such as the subprime mortgage crisis and Euro-zone sovereign debt crisis. This choice makes the results of the paper more efficient and robust to obtain general conclusions. Thirdly, despite being the largest CSR initiative in the world, the UNGC has sparked relatively minimal analyses, and existing investigations mainly focus on the motivations of firm managers, using case studies of one or a few companies. Although case studies represent a good path to insight into complex, contemporary phenomena (Yin, 2009), and have revealed very relevant findings in the field, they often lack generalizability to other contexts and overall conclusions (Eisenhardt, 1989). With the aim of overcoming this limitation, our paper focus on a sample of 125 companies (equivalent to 1000 firm-years). More interestingly, the companies in the sample operate in the three countries that comprise the highest number of firms committed to the principles of the UNGC, thus adding more relevance to the obtained results. Finally, the previous revised papers mostly focus on a small number of companies operating in the same industry. Our paper contains a representation of companies which operate in the 10 primary economic sectors, according to the Global Industry Classification Standard system.

Summarizing, this paper contribute to the existing literature by showing empirical evidence which clearly indicates that companies assuming the same principles of international standards related to CSR, have different impact on their ESG performance. Those findings respond to Adams et al. (1998) argument that differences across countries are complex and demand investigations of country-specific effects, and what is more important, this paper tries to understand why those divergences are based on. Accordingly, we adopt a neo-institutional framework to determine if organizational drivers influence CSP, CEP and CGP, as a result of the pressures for institutional isomorphism. We also rely on a multi-dimensional methodology (HJ-biplot) to capture the multivariate features of CSP, CEP and CGP (Carroll, 1979).

The results have significant implications for practitioners, corporate managers and national government bodies; we find that

the different concepts that constitute the CSP, CEP and CGP constructs prompt distinct valuations across different countries. These differences must be considered for sustainable development promotions, to ensure reasonable goals for ESG strategies that account for the varying preferences of national societies and stakeholders. Furthermore, the results confirm the use of a neo-institutional framework, in that we find that Spanish and French companies obtain similar levels of CSP and CGP, higher than those obtained by Japanese firms, whereas Japanese firms seem more committed to environmental issues than their Spanish and French counterparts. That is, country-specific characteristics significantly influence the CSP, CEP and CGP of the different companies we analyse.

The paper is structured as follows. In the next section, we introduce our theoretical approach, review related research and develop our working hypotheses. After we present the methodology we use for our empirical analysis, we outline the results. Finally, we conclude with a discussion and some implications.

2. Background

2.1. Theoretical approach

Corporate social and environmental accounting and performance research has focused on different frameworks (Deegan, 2002), being Stakeholder theory and Legitimacy theory (Lindblom, 1994) the most employed (Gray et al., 1995; Garriga and Melé, 2004; Lukka, 2010). Analysing the different approaches that used a non-positivist language to describe the practices and consequences of the companies' behaviour results in the appearance of 7 theoretical frameworks, including Institutional theory. In contrast to the behaviourist approach, Institutional theory is based on the generation of socially generally accepted rules and his explanation. In fact, Neo-institutional theory predicts that firms in different countries adopt different CSR priorities, because cultural elements, including beliefs and socially accepted rules, influence organizational actions (Selznick, 1996), such as CSR practices (Frederick, 2006) or implementations of codes, standards and eco-management policies (Boiral, 2007). DiMaggio and Powell (1991) cite several factors that prompt similar organizational behaviour and acknowledge two types of isomorphism: competitive and institutional. Competitive isomorphism reflects efficiency considerations, such that if a cheaper, better or more efficient way of doing things exists, competitive forces encourage organizations to adopt that approach. Institutional isomorphism instead leads to structural resemblance and homogenisation in management practices; this complex process comprises three main mechanisms: (1) coercive, (2) normative and (3) mimetic.

First, coercive isomorphism results from formal (e.g. laws) and informal (e.g. agreements, codes of conduct) pressures exerted on organizations by influential others or by the cultural beliefs of the society in which they conduct their activities. In relation to CSR practices, coercive isomorphism might include regulations for issuing ecological information, mandatory compliance or threats of future regulation (Larrinaga-González, 2007). Second, normative isomorphism results from the professionalization of decision makers in organizations, which implies their similar socialisation. Thus, managers develop similar ways of perceiving, interpreting, understanding and solving the problems their organizations face. With their similar cognitive mind-sets, they develop similar behavioural patterns and find similar solutions. For example, despite the ongoing controversy about whether CSR practices produce positive economic results, Larrinaga-González (2007) argues that organizations participate in a CSR initiative, such as the UNGC, mainly in response to values shared by other organizations and to gain legitimacy, not necessarily for financial reasons.

Deciding to participate in the UNGC does not mean organizations are committed to certain social conventions; rather, it implies they are attentive to and have the capacity to adapt to social norms. Third, with regard to mimetic isomorphism, uncertainty can prompt organizations to mimic their competitors. For example, organizations might be motivated to adopt a CSR initiative or begin the process of issuing environmental or social information because their competitors are doing so, such that it provides organizations with social legitimacy. In this case, productive efficiency is defined by the level of success and social acceptance. According to Larrinaga-González (2007), CSR features a certain degree of mimetic convergence, in that organizations copy their peers' practices (e.g. issuing non-financial reports). Bansal (2005) cites mimetic pressures to explain why Canadian companies in environmentally sensitive sectors promote sustainable development.

Institutional effects spread throughout organizational fields, which constitute a recognised area of institutional life, including key suppliers, resource and product consumers, regulatory dependencies and other organizations that provide similar services or products. Structural isomorphism is an important consequence of both competitive and institutional processes. As a result, organizations compete not only to obtain resources or customers but also to gain power and legitimacy, together with positive social and economic results.

Following Aerts et al. (2006) who consider that coercive and mimetic institutional pressures both affect ESG performance, and in order to answer our research question, we base on mimetic and coercive processes from the Neo-institutional theory. In fact, the main reason for adopting the principles of the UNGC by the analysed companies may be explained as a mimetic response because their competitors in each country are doing so. However we think that companies' ESG performance can differ from one country to another mainly because the ways of perceiving, interpreting, and solving country-specific cultural beliefs in which they conduct their activities differ in the three considered countries (i.e., Spain, France and Japan). This theoretical framework is useful for exploring companies' CSP, CEP and CGP (Baxter and Chua, 2003; Bebbington et al., 2009) and how these constructs might be influenced simultaneously by diverse factors. In particular, we consider this theoretical framework relevant for the study of organizations' sustainable development (Bansal, 2005), because (1) organizations' commitment to sustainable development is judged on the basis of individual values and beliefs, which affect organizational perceptions of acceptability and legitimacy; (2) diverse social agents with varying opinions of what represents sustainability can induce debate to establish common rules and beliefs and (3) elements that constitute sustainable development become institutionalised through international regulations and initiatives.

2.2. Hypothesis development

Companies' commitment to voluntary CSR initiatives depends on individual, organizational, national and trans-national actors and agencies. Empirical studies of how CSR standards contribute to overall firm-level ESG performance are scarce though. In both practitioner (Accenture and UNGC, 2010) and academic literature (Ayuso and Roca, 2010; Byrd, 2009; Cetindamar and Husoy, 2007; Janney et al., 2009; Runhaar and Lafferty, 2009), contributions analyse the reasons for the widespread acceptance of UNGC. Even the UNGCO has carried out a range of studies to understand the motives of implementing it (UNGCO, 2007, 2009, 2010, 2012, 2013). According to these works of why firms adopt this initiative (Byrd, 2009; Janney et al., 2009), the main rationales are to improve corporate reputation and increase employee satisfaction (Runhaar and Lafferty, 2009), as well as improve the organizations' image

(Ayuso and Roca, 2010; Cetindamar and Husoy, 2007). Other studies analyse the benefits of this initiative, including improved corporate images, enabling the organization to stand out from its competition, learning about better practices, competitive advantages and facilitating strategic changes (Ayuso and Roca, 2010; Waddock et al., 2008).

However, the extent to which firms in different countries adopt different voluntary CSR initiatives, as well as the type of initiative legitimised by these societies, also should be a function of national social, political and economic conditions (Aaronson, 2003; Baughn et al., 2007; Hahn and Kühnen, 2013; Maignan and Ralston, 2002; Welford, 2004, 2005). Geographical diversification tends to increase the number and diversity of stakeholder pressures in the firm's external environment, because of the social, cultural, legal, regulatory and economic variations across countries (Brammer et al., 2006; Cavalcanti Sá de Abreu et al., 2012; Sharfman et al., 2004). Williams and Aguilera (2008) propose using national differences as a factor for analysis, on the basis of extensive evidence from international management studies that shows that managers behave differently, according to national cultural work norms (Hofstede, 1980; Schwartz, 1994), organizational cultures (O'Reilly and Chatman, 1996; Schein, 1992) and the focal profession (Sirmon and Lane, 2004). Williams and Aguilera (2008) cite laws passed to encourage CSR as uniquely powerful, in at least three respects: (1) the standards established by laws and mandatory regulations help establish social expectations about responsible corporate behaviour, (2) when social expectations have been created, demands from other entities, such as consumers, institutional investors, communities and NGOs, interact to create incentives for firms to meet the standards set by the law, and (3) laws and government policies send strong signals about the importance of a topic, which then is amplified by the business culture of the country, customers' interests, institutional investors' actions, corporate governance regimes, NGO effectiveness and the individualistic versus collectivist nature of the country's underlying political and social philosophy.

Several studies identify differences in the adoption of voluntary CSR initiatives, depending on the geographical spread of the companies. Marimon et al. (2012) indicated that Europe and Asia have the first and second highest number of companies that disclose sustainability reports according with the Global Reporting Initiative (GRI) standards. In this line, Fernandez-Feijoo et al. (2014) identified countries with high levels of companies disclosing sustainability reports, such as Spain and Portugal, and others with a low application such as the U.S. and Brazil. Welford (2004) concluded that differences in the application of voluntary CSR initiatives can be attributed to several institutional and social pressures to which companies are exposed in different countries. In studying differences among companies from the United Kingdom, Norway, Hong Kong and Singapore, Welford (2004) concludes that companies respond to what is important in their own countries. In Singapore, whose economy is based on international trade, firms focus on external aspects of CSR, whereas in Norway, they prioritise social policies, and in Hong Kong, firms emphasise internal CSR. Furthermore, Welford (2005) notes that CSR relates to national economic development: The more developed a country is, the greater the intensity of its CSR practices. Despite some persistent differences between Asian and Western countries, some distinctions are falling away, especially as Japanese companies take CSR issues more seriously. Maignan and Ralston (2002) find that continental European companies emphasise codes of ethics and philanthropic CSR less than do US firms, but US firms display lower levels of environmental CSR. Baughn et al. (2007) compare environmental and social CSR issues across 14 Asian countries, with companies from Western Europe, Australia, New Zealand, the United States, Canada, the

Middle East and Africa. They reveal strong relationships between CSR and a country's economic, political and social contexts, which reflect the importance of national-level developments of an institutional capacity to promote and support CSR practices. Aaronson (2003) indicates that the United States and Britain, which have similar political and entrepreneurial cultures, adopt different CSR approaches, seemingly because British policymakers have made domestic and global CSR a priority. Thus, British businesses likely act ethically everywhere and offer more extensive disclosures, with better coordinated information, than do US firms.

In a similar context, several authors (Kolk and Perego, 2010; Smith et al., 2005) provide evidence that companies from countries with a stakeholder orientation (civil law) issue more and higher quality corporate environmental reports than do companies from countries with shareholder orientations (common law), because the former are more sensitive to stakeholders' needs (Ball et al., 2000; Simnett et al., 2009). Civil law countries adopt a more communitarian perspective and pass laws to protect the rights of different stakeholders, such as workers (Marginson and Sisson, 1994). A common law legal system instead is oriented toward protecting shareholders (Prado-Lorenzo et al., 2013). Bushman et al. (2004) study voluntary governance disclosures by a sample of 1000 companies from 46 countries and conclude that transparency is greater in countries where the legal/judicial regime is characterised by a common law origin and good judicial efficiency.

The three countries that contain the most firms committed to the UNGC—France, Japan and Spain—embody greatly contrasted institutional characteristics (Aoki, 1988), with contrasting legal and judicial traditions (Amann et al., 2007). For example, a Judeo-Christian cultural background versus a Buddhist cultural background may prompt them to place different emphases on social versus environmental priorities. As another example, in Japan, a strong tradition encourages avoiding court proceedings and resolving conflicts through informal and undisclosed arrangements, which is very different from the traditions in Spain and France and could influence levels of governance transparency.

Taking in to account the Neo-institutional theory, and more specifically coercive and mimetic pressures, it may be assumed that organizations from the same country could show similar ESG performance because two main reasons: 1) Firstly, by the presence of country-specific cultural beliefs in which companies conduct their activities; and, 2) Secondly, the presence of mimetic convergence, existing companies that mimic their peers ESG practices. On the basis of these premises, we formulate the following working hypothesis:

Companies operating in different countries with different institutional backgrounds, exhibit different firm-level priorities in ESG performance, even in an scenario of a common commitment to the same principles of the UNGC.

3. Sample delimitation and methodology

3.1. Corporate social, environmental and governance performance measures

To study the three countries with the most firms committed to the UNGC, Spain, France and Japan, we collected data about the pertinent companies' levels of CSP, CEP and CGP. The data collection involved an intensive search of the ASSET4[®] database of Data-Stream, by Thomson Reuters Inc., which provides objective and systematic ESG performance data according to more than 280 key performance indicators and 750 individual data points. The original data sources include more than 4000 global companies that appear

on the MSCI World, MSCI Europe, STOXX 600, NASDAQ 100, ASX 300 and MSCI Emerging Markets indices. This data set thus offers the most complete ratings of ESG performance and social responsibility.

The database search revealed 125 companies (see Table A.1 in the Appendix) that were subject to constant monitoring from 2005 to 2012, equivalent to 1000 firm-years that we could group into 10 primary economic sectors, according to the Global Industry Classification Standard system. Corporate social (CSP), environmental (CEP) and governance (CGP) performance reflected the scores of each company on the ESG composite indexes provided by the ASSET4[®] database. These composite indexes include variables that capture a wide range of stakeholder performance issues, complemented by independent external social audits (Orlitzky et al., 2003) that apply social and environmental screens to reflect companies' ESG strengths and weaknesses. The composite indexes for this research can be defined as follows:

- CSP measures a company's capacity to generate trust and loyalty toward its workforce, customers and society. It is a reflection of the company's reputation, which is a key determinant of its ability to generate long-term value. This composite index results from a weighted score of companies' strengths and weakness on indicators related to (1) product responsibility, (2) community, (3) human rights, (4) diversity and opportunity, (5) employment quality, (6) health and safety and (7) training and development.
- CEP measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems. This composite index results from a weighted score of companies' strengths and weaknesses on indicators related to (1) emission reduction, (2) product innovation and (3) resource consumption reduction.
- CGP measures the systems and processes a company has in place to ensure that its board members and executives act in the best interests of its shareholders. This composite index results from a weighted score of companies' strengths and weaknesses on indicators related to (1) board functions, (2) board structure, (3) compensation policy, (4) vision and strategy and (5) shareholder rights.

Each composite index take a value from 0 to 100; the higher companies' score on each index, the higher their ESG performance.

3.2. Methodology: HJ-biplot

A biplot method is a statistical technique for graphically depicting a data matrix $X(n \times p)$, derived from analysing n individuals according to p numerical characteristics (Aldrich et al., 2004; Gabriel, 1971; Gabriel and Odoroff, 1990; Gower and Hand, 1996). For this research, the n individuals are the Spanish, French and Japanese companies (see Table A.1 in the Appendix for complete details about each company); the p numerical characteristics are the company scores on their levels of CSP, CEP and CGP. The biplot technique offers a two-dimensional visual representation that is based on two types of vectors, related to two forms of information: observations (rows) and variables (columns).

The main advantage of biplots over other statistical, graphical models is their ability to identify the associations among observations, among variables and among variables and observations. A classical biplot approach (Gabriel, 1971) employs the least squares method and decomposition in the vectors and singular values of the $X(n \times p)$ matrix, such that it adequately reflects the statistical and geometric properties of the variables, but it cannot appropriately represent individuals. To mitigate this limitation, we adopt a specific biplot, namely, the HJ-biplot, which provides a multivariate graphical representation of an $X(n \times p)$ matrix and can

depict both markers (individuals and variables) in the same reference system with high quality of representation (Galindo, 1985, 1986). This method relies on principal component analysis, which can assess an initial matrix data set by using a simplified configuration in a reduced space.

In interpretations of the HJ-biplot (Gower and Hand, 1996), points represent observations, and axes reflect variables. It is worth mentioning that the axes are variables obtained from linear combinations of the initial observed variables. In the centred axes, the origin coincides with the mean value of all the variables. Then the interpretation reflects the angles between the different vectors; variables with vectors that display a smaller angle exhibit similar behaviours, in that the angle between two vectors that link two given variables reflects a correlation. Close observation points refer to similar observations; remote observation points instead entail non-similar observations. Furthermore, a small angle between a given observation and a variable means that the observation provides a significant explanation of the variable, which has a high value for that observation. In turn, the distance between points indicates the variability of those points. To determine the variability of the variables, we use their length, which is also manifested by their dispersion in the figure. If two variables are closer, they are highly correlated (i.e. exhibit similar behaviour); if two other variables take different directions, they are inversely correlated. If they are perpendicular, they are independent (Blasius et al., 2009; Gardner et al., 2005). Finally, the smaller the angle between two vectors that join the centre of gravity with the points that represent the variables, the more concentrated the characters are.

With this technique, we can locate companies and study their similarity in relation to their level of CSP, CEP and CGP. We also represent each firm's CSP, CEP and CGP levels, which enables us to graphically analyse their cross-correlations and relationships. In summary, we use HJ-biplot to describe companies and their CSP, CEP and CGP, according to their closeness. The software we used to implement HJ-biplot includes several Matlab routines¹ developed by Vicente-Villardón (2010), which have been previously used in previous research (Gallego-Álvarez et al., 2013; García-Sánchez et al., 2013; among others).

Alternative methodological approaches that may be implemented to test the working hypothesis include: 1) Least squares approximation of matrices by additive and multiplicative models (Gabriel, 1978); 2) Standard Biplot displays for multivariate matrices (Gabriel, 1971); 3) GH'-Biplot or CMP-Biplot (Column Metric Preserving); 4) Multiple criteria data envelopment analysis for full ranking units (Zhao et al., 2006); and, 5) Neural networks (Muttill and Chau, 2006). However, we selected the HJ-Biplot because it obtains the same goodness of fit for the columns and rows of the multivariate matrices than other Biplots, but being higher than the revealed by the previous mentioned methods. Furthermore, the HJ-Biplot implemented to a positive matrix-data provides better representations of the barycentric parameters.

4. Results

In Table 1 we summarise the descriptive statistics for companies' CSP, CEP and CGP levels across the full sample from 2005 to 2012. At this level of aggregation, the companies score better on social and environmental than governance performance, with higher CEP (72.98) scores compared with CSP (66.88) and much higher than CGP (32.87). Yet the maximum and minimum values for the composite indexes also reveal vast diversity in firm performance values. For example, the most successful company in terms of CSP achieves

a score of 98.7, and the least successful earns a score of only 3.44. Similar patterns emerge from the companies' CEP and CGP levels, suggesting different stakeholder orientations across the companies in our sample. In general, we observe a positive trend in companies' CSP, CEP and CGP levels over the entire time period, which implies growing commitments by companies to ESG issues.

To group companies according to their CSP, CEP and CGP levels, we implemented the HJ-biplot technique for each period (2005–2012). In Table 2 we provide the extracted eigenvalues and explained variance for each factor. A dominant factor explains more than the 60% of the inertia in the system; it also is very robust, in that it accounts for much of the variance during all the periods analysed. The eigenvalue trend gets truncated by the third factor, which accounts for accumulated inertia of about 90%. The remaining factor provides significantly less information. Thus, we analyse the first two factors (axes in the biplot graphical representation) to classify the companies.

Although the stability and robustness of the extracted factors seems consistent over time, we also must test whether the factors can be interpreted similarly during all the periods covered by the sample. Table 3 reveals the contribution of each composite index to the factors; it shows that the CSP and CEP composite indexes contribute more to the first factor, but their contribution diminishes for the second factor. In contrast, firms' CGP relates more to the second extracted factor. The contribution of each composite index to these factors does not seem change across different time periods, so we may theoretically interpret the factors in the same way for the entire sample time span. That is, the first factor pertains to firms' CSP and CEP, and the second factor captures the CGP levels obtained by the firms in this sample.

Fig. 1 depicts all the companies analysed and the vectors for the three composite indexes (CSP, CEP and CGP) for the final year under investigation (2012), in relation to the variables on the different axes (i.e. factors). As we explained, the interpretation of the variables (composite indexes) depends on the angles between the vectors (small angles indicate variables with similar behaviours). Thus, we note the similarity between the items related to the CSP and CEP composite indexes but a significant opposition between the CEP and CGP levels achieved by companies in the sample.

A variable's proximity to the coordinate axis reflects its explanatory capacity for each quadrant (to read the biplot, we start with the upper-right quadrant and move counter clockwise). The information linked to CSP best explains companies located in quadrants 2 and 3, whereas companies located in quadrants 1 and 4 exhibit lower CSP. The vector representing the CEP composite index features in quadrant 2 and, to a lesser extent, quadrant 1. In contrast, firms located in quadrants 3 and 4 achieve lower environmental performance. The vector representing the CGP composite index characterises quadrant 3 and, to a lesser extent, quadrant 4, so companies in quadrants 1 and 2 obtain poorer corporate governance performance.

To interpret the companies and the variables together, we assess the projection of each firm on the variable (each company's identifier appears in Table A.1 in the Appendix). Some companies were omitted from the representation of the HJ-biplot, for improved readability. As previous research indicates, a projection fits better when there is a high degree of proximity to the variable (i.e. composite index) and a long distance from the coordinate origin (García-Sánchez et al., 2013). The axes are new factors, obtained as linear combinations of the observed composite indexes.²

¹ These routines are available at: <http://biplot.dep.usal.es/classicalbiplot>.

² The positive and negative values on the axes (i.e. factors) derive from the matrix decomposition of their original values and represent the vectors in a two-dimensional Euclidean space.

Table 1
Descriptive statistics.

		Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Obs.
Full sample 2005–2012	CSP	66.8837	79.5500	98.7000	3.4400	30.3631	-0.8511	2.2822	1000
	CEP	72.9865	87.2650	96.9600	9.3000	27.1683	-1.1876	2.9200	1000
	CGP	32.8726	20.2250	95.2900	1.4900	28.9782	0.7145	20.8045	1000
2012	CSP	83.9933	89.8400	97.4200	13.3200	16.3833	-2.4353	9.3717	125
	CEP	87.5286	91.7600	94.2100	27.1200	11.0049	-3.2454	15.0924	125
	CGP	41.4242	36.4000	94.7800	1.6000	28.7322	0.3585	1.7091	125
2011	CSP	83.8410	89.6900	97.4800	5.4700	18.0155	-2.4468	9.3145	125
	CEP	85.8173	90.5400	94.3900	21.2500	13.5226	-2.8459	11.2065	125
	CGP	43.3803	35.4400	93.1000	1.8600	28.9327	0.3841	1.7115	125
2010	CSP	66.7836	80.8900	97.6700	4.1400	31.0419	-0.8413	2.1997	125
	CEP	74.0642	89.0100	94.8400	9.3000	26.5233	-1.2479	3.1510	125
	CGP	35.7529	20.9200	95.2600	2.1700	30.9088	0.6184	1.8529	125
2009	CSP	66.8583	78.9700	97.8000	3.9600	30.3996	-0.7970	2.2029	125
	CEP	74.5549	88.1800	94.3600	10.0100	25.6157	-1.2964	3.2848	125
	CGP	34.4303	20.3700	92.0300	1.4900	30.2338	0.5947	1.8674	125
2008	CSP	66.0768	76.2900	97.6800	3.5300	29.5139	-0.8876	2.4766	125
	CEP	72.0757	86.7800	94.0100	9.6900	27.5759	-1.1978	2.9320	125
	CGP	29.5052	16.1800	95.2900	1.5600	27.9657	0.8432	2.2979	125
2007	CSP	58.7950	69.6300	97.8900	3.4400	32.0759	-0.4841	1.7532	125
	CEP	67.0459	82.2500	94.8400	9.8900	29.9324	-0.8599	2.1451	125
	CGP	27.6527	14.1700	93.1000	1.5800	27.8063	0.9592	2.5486	125
2006	CSP	56.0922	62.6600	98.5400	5.2600	31.8778	-0.3056	1.6445	125
	CEP	62.0513	73.5100	96.6600	12.4500	30.7604	-0.4252	1.6269	125
	CGP	25.4541	13.4900	94.1200	2.1200	25.8506	1.1437	2.9868	125
2005	CSP	52.6296	55.0200	98.7000	6.3800	32.5078	-0.0314	1.4705	125
	CEP	60.7539	70.7300	96.9600	12.9700	31.4611	-0.3025	1.4593	125
	CGP	25.3808	13.0500	90.6700	2.2900	25.7464	1.0586	2.7312	125

This table shows the main descriptive statistics for companies' corporate social performance (CSP), environmental performance (CEP) and governance performance (CGP) for every period considered (2005–2012).

In quadrant 2, companies such as Fuji Electric (mark 54), Toshiba (mark 105) and Sekisui chemical (mark 89) are characterised by reduced emissions, mitigated impacts on the environment and thus high levels of CEP, as well as good performance in CSP, though to a lesser extent, as indicated by their proximity to the CEP composite index and distance from the quadrant's centre. In the third quadrant, companies such as Ferroviol (mark 118), Red Electrica Corporation (mark 124) and Vinci (mark 32) achieve high levels of CGP, suggesting they are committed to ensuring adequate board structures, functions and compensation policies. The companies in quadrant 3 also achieve good levels of social performance. Thus, whereas companies in quadrant 2 tend to encourage environmental performance, those in the third quadrant place more

emphasis on corporate governance issues. Firms in quadrant 4, such as Fukuoka financial group (mark 57) and Hirose electric (mark 58), achieve satisfactory levels of CGP but poor performance on their social and environmental dimensions. Finally, the companies in the first quadrant, such as Dowa holding (mark 52) and Renesas electronics (mark 84), achieve satisfactory levels of CEP but low levels on the remaining composite indexes.

Next, we analyse the performance patterns of companies that are in the same country, as well as by geographical areas. To that aim, Figs. 2 and 3 depict the companies and the vectors of the three composite indexes for 2012 but also differ from Fig. 1. Fig. 2 represents the convex-Hulls areas of a hierarchical cluster that groups companies according to their similar patterns of ESG performance.

Table 2
Eigenvalues and variance explained.

2012				2011			
Factor	Eigenvalue	Variance explained	Cumulative variance	Factor	Eigenvalue	Variance explained	Cumulative variance
1	233.397	62.741	62.741	1	245.723	66.055	66.055
2	100.413	26.993	89.734	2	88.24	23.72	89.775
3	38.19	10.266	100	3	38.037	10.225	100
2010				2009			
Factor	Eigenvalue	Variance explained	Cumulative variance	Factor	Eigenvalue	Variance explained	Cumulative variance
1	267.171	71.82	71.82	1	265.926	71.486	71.486
2	81.203	21.829	93.649	2	79.561	21.387	92.873
3	23.626	6.351	100	3	26.513	7.127	100
2008				2007			
Factor	Eigenvalue	Variance explained	Cumulative variance	Factor	Eigenvalue	Variance explained	Cumulative variance
1	265.171	71.283	71.283	1	264.649	71.142	71.142
2	80.798	21.72	93.003	2	81.308	21.857	92.999
3	26.031	6.997	100	3	26.043	7.001	100
2006				2005			
Factor	Eigenvalue	Variance explained	Cumulative variance	Factor	Eigenvalue	Variance explained	Cumulative variance
1	262.127	70.464	70.464	1	256.23	68.879	68.879
2	80.794	21.719	92.183	2	88.437	23.773	92.652
3	29.079	7.817	100	3	27.333	7.348	100

Table 3
Composite indexes' contributions to extracted factors.

2012			2011		
Composite index	Factor 1	Factor 2	Composite index	Factor 1	Factor 2
CSP	823	6	CSP	809	17
CEP	627	271	CEP	684	203
CGP	432	534	CGP	489	492
2010					
Composite index	Factor 1	Factor 2	Composite index	Factor 1	Factor 2
CSP	880	10	CSP	866	10
CEP	719	217	CEP	715	214
CGP	428	555	CGP	417	564
2008					
Composite index	Factor 1	Factor 2	Composite index	Factor 1	Factor 2
CSP	872	6	CSP	873	4
CEP	694	242	CEP	686	253
CGP	404	573	CGP	398	576
2006					
Composite index	Factor 1	Factor 2	Composite index	Factor 1	Factor 2
CSP	860	2	CSP	873	1
CEP	660	280	CEP	596	358
CGP	370	595	CGP	356	598

This table shows the contribution of each composite index: that is, companies' corporate social performance (CSP), environmental performance (CEP), governance performance (CGP) to the extracted factors. The highest contribution of each composite index to the factor is shown in italics.

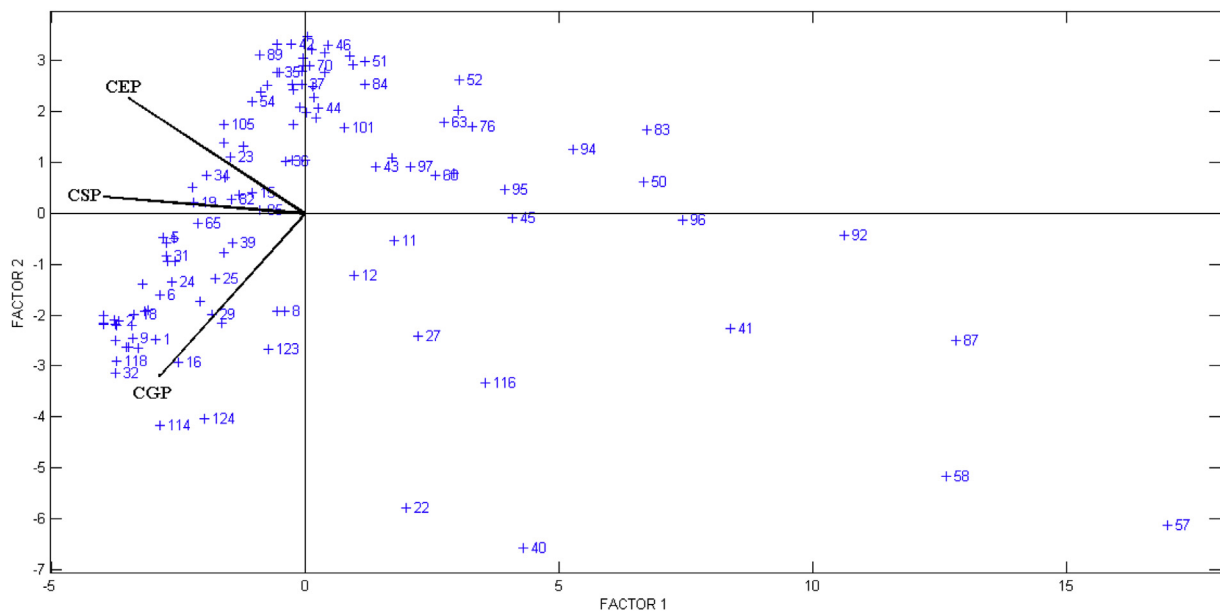


Fig. 1. HJ-biplot of companies' environmental, social and governance performance, 2012

Fig. 3 shows the convex-Hulls areas of a nominal variable that clusters the companies into two geographical areas, Europe and Japan.

According to Fig. 2, we find three patterns of companies' ESG performance. A first cluster of companies (group 1) is characterised by their high commitment to CGP and, to a lesser extent, CSP. They coincide with Spanish firms, which mainly seem to focus on governance-related issues. With a few exceptions, the second cluster of firms (group 2) exhibits the strongest commitment to environmental issues; it mainly coincides with Japanese companies. Finally, the third cluster of companies (group 3) behaves similarly to the first cluster but reveals higher CGP and lower CSP levels than the Spanish companies. This cluster mainly comprises French companies. That is, the Spanish and French companies seem to focus on

social and governance issues, whereas Japanese firms are characterised by their high commitment to environmental issues.

The information revealed by Fig. 3 suggests that Japanese companies behave differently than do French and Spanish firms. Group 1 in this figure encompasses French and Spanish companies; group 2 includes Japanese firms. The Spanish and French companies exhibit similar behaviours and achieve the greatest levels of CGP. In contrast, Japanese companies mainly focus on environmental issues and reveal relatively poorer performance on corporate governance issues.

We capture these different patterns from 2012 data; we also want to determine if their behaviours remain consistent over time. In Figs. 4 and 5, we thus depict the evolution of the representations of the European and Japanese clusters in the HJ-biplots from 2007

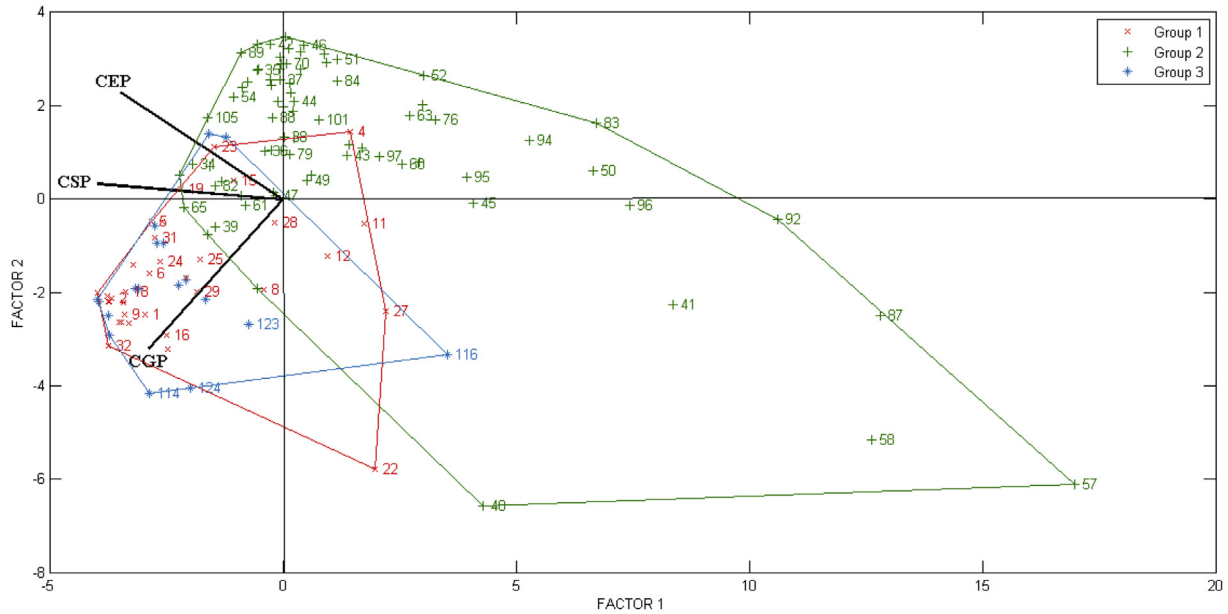


Fig. 2. HJ-biplot of companies by environmental, social and governance performance in 2012, with hierarchical clusters.

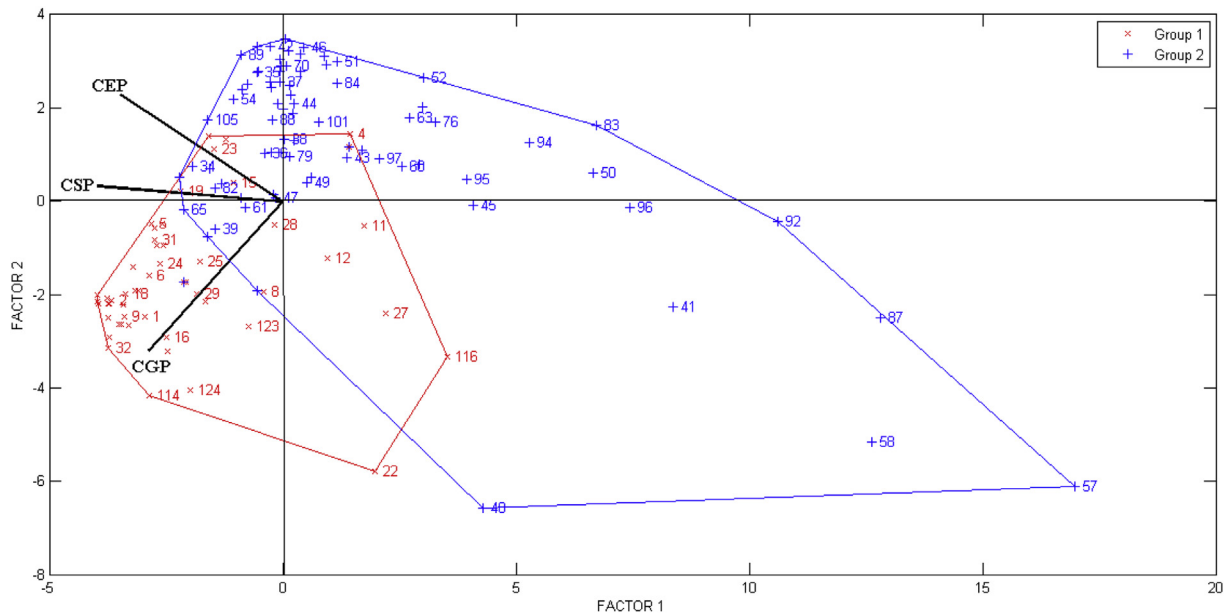


Fig. 3. HJ-biplot of companies by environmental, social and governance performance in 2012, clustered by geographical area nominal variable.

to 2012. We omitted the 2005 and 2006 cluster, to enhance readability, but these results are available on request.

According to Fig. 4, the European cluster of companies is stable over the entire period; the high performance of these firms on the social and governance dimensions thus does not appear spurious. Moreover, the 2008 financial crisis does not seem to have had any adverse effect on the European companies' CSP and CGP, which suggests their strong commitment to social and governance issues even in difficult economic settings. However, we note the slight movement of the European cluster from the first and second to the third and fourth quadrants, such that European companies may have paid less attention to the environmental dimension and prioritised social and corporate governance issues. Finally, in the last

year (2012), this cluster concentrated in the third quadrant, which appears to confirm the growing commitment of these companies to corporate governance.

Finally, Fig. 5 suggests greater variability in the behaviours of the Japanese cluster of companies in terms of ESG issues. The Japanese companies mainly focused on environmental issues between 2007 and 2010, though in 2011 and 2012, some Japanese firms moved to the fourth quadrant. Apparently, the financial crisis shifted the commitment of some Japanese companies, from environmental to corporate governance issues, possibly because of the growing presence of foreign investors on the Japanese stock exchanges, who called for more transparency in their corporate governance (Amann et al., 2007).

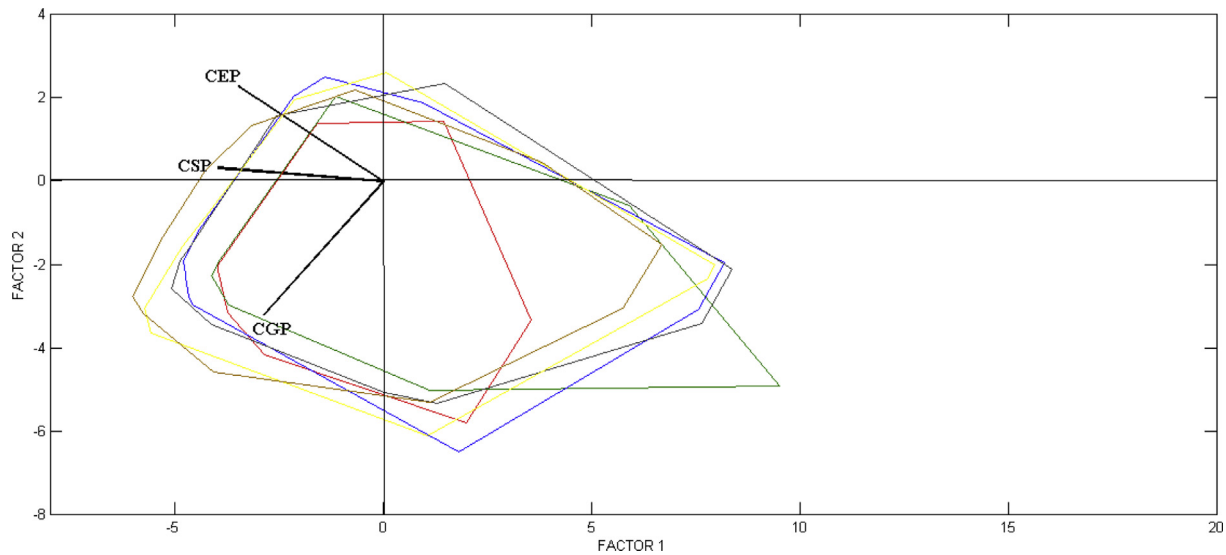


Fig. 4. Evolution of the European cluster of companies, 2007–2012 Notes: The red line represents the cluster for 2012, the green line for 2011, the blue line for 2010, the grey line for 2009, the yellow line for 2008 and the brown line for 2007. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article)

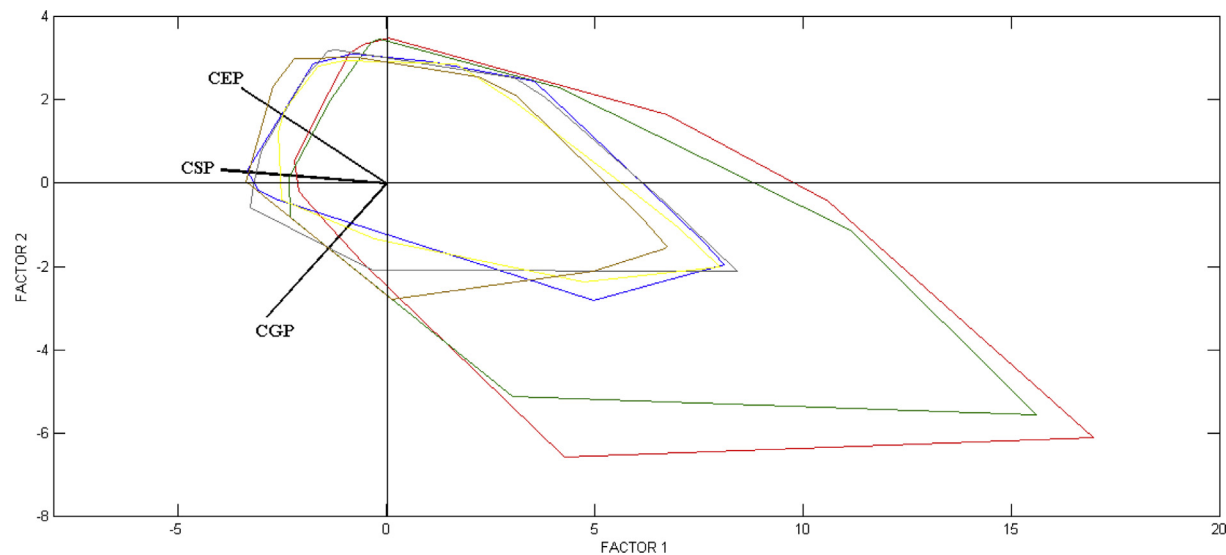


Fig. 5. Evolution of the Japanese cluster of companies, 2007–2012 Notes: The red line represents the cluster for the 2012 period, the green line for 2011, the blue line for 2010, the grey line for 2009, the yellow line for 2008 and the brown line for 2007. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article)

In summary, these findings generally validate our hypothesis, because the different countries, with different institutional backgrounds, induce different priorities among their firms, in terms of ESG performance. France and Spain differ from Japan, from both cultural and institutional perspectives, but are rather close to each other. In turn, French and Spanish firms are more similar in terms of their CSR, whereas Japanese firms adopt a different profile.

5. Concluding remarks

According to a Neo-institutional approach, firms from different countries adopt different management practices, implement

different organizational choices and weight business objectives differently (e.g. profitability, growth, CSR). Using the coercive and mimetic isomorphisms, this paper investigates if even the adoption of the same voluntary CSR initiative—the UNGC—, corporate environmental, social and governance (ESG) performance is influenced by institutional and stakeholders' pressures which are of different nature among the businesses geographical spread. To that aim, the ESG performance of the companies operating in the three countries with the highest number of firms committed to the UNGC is examined by implementing a multivariate HJ-Biplot methodology.

The main results revealed that Spanish and French firms obtain similarly high levels of social and corporate governance performance, whereas Japanese firms are more committed to

environmental issues. These results suggest the potential impact of cultural differences, rooted in distinct religious backgrounds. Whereas Catholic tradition –largely present in Spain and France– emphasizes human well-being and encourages the social dimension by the principles of Christianity, Shintoism/Buddhism traditions –largely present in Japan– mainly focus on nature and the environment. The higher relative corporate governance performance of those companies operating in Spain and France –compared with Japanese firms– can be explained by the wide traditional importance of the role of trade unions in both countries, where their demands have been an important struggle of Spanish and French societies in the last century. Moreover, the Japanese society is based in a collection of principles, values and norms where social and governance issues are assumed morally correct and therefore do not managed intensively by the companies. This reasoning may allow to better understanding the relative out-/under-performance of the different companies where the distinguishing feature refers to their geographical spread.

The results of this study will provide relevant implications for improving several processes such as follows: (1) for academics because differences across countries demand new research which could allow better understanding this complex reality, (2) for practitioners because they will be able to properly manage

sustainable and societal development issues, and more specifically to improve the ESG performance in transnational companies. This is of special importance because, nowadays, global economy supposes that big transnational companies tend to have similar priorities related with CSR activities. Although, the adoption of different voluntary CSR initiatives –such as the UNGC– may put on the same level the companies ESG performance, the findings of this research show that CSR is a meta-construct that comprise different social and ethical concepts, being subject to vary among different institutional and social schemes.

Although this study is limited in scope because it only considers three countries, future research seems to be focused to expand the comparison to include firms from North America, other European countries and Asian countries other than Japan. Such an extension would help strengthen the generalizability of our results, as well as reveal if Japanese firms are unique or exhibit similarities to firms from other Asian countries.

Appendix

Table A.1
Sample breakdown by company geographical spread.

<i>ID</i>	<i>French companies</i>	40	Benesse holdings	81	Olympus	121	Gas natural
1	Air France-KLM	41	Canon marketing Hapan	82	Omron	122	Indra sistemas
2	Alcatel-Lucent	42	Casio computer	83	Osaka gas	123	NH hoteles
3	Alstom	43	Chiyoda	84	Renesas electronics	124	Red electrica corpn.
4	Bolloré	44	Citizen holding	85	Resona holdings	125	Repsol YPF
5	Bouygues	45	Cosmo oil	86	Ricoh		
6	Carrefour	46	Dai nippon printing	87	Ryohin keikaku		
7	Casino Guichard	47	Daiichi sankyo	88	Seiko Epson		
8	CNP assurances	48	Daikin industries	89	Sekisui chemical		
9	Crédit Agricole	49	Daiwa securities group	90	Shimizu		
10	Danone	50	Dentsu	91	Shin-etsu chemical		
11	Dassault Systemes	51	DIC	92	Shinko elec. inds.		
12	Klepierre	52	Dowa holding	93	Shiseido		
13	L'oréal	53	Ebara	94	Sojitz		
14	Lafarge	54	Fuji electric	95	Sumitomo mitsui finl. Group		
15	Lagardère groupe	55	Fujikura	96	Sumitomo mitsui tst. Holding		
16	Natixis	56	Fujitsu	97	Sumitomo		
17	Peugeot	57	Fukuoka financial group	98	Systemex		
18	Renault	58	Hirose electric	99	Takeda pharmaceutical		
19	Saint Gobain	59	Hitachi chemical	100	Teijin		
20	Sanofi	60	Hitachi high – techs.	101	Terumo		
21	Schneider Electric	61	Hitachi	102	Tokio marine holdings		
22	SCOR se	62	Inpex	103	Tokyo electron		
23	SEB	63	Itochu	104	Toppan printing		
24	Société Generale	64	JSR	105	Toshiba		
25	Sodexo	65	KAO	106	Toto		
26	Technip	66	Kikkoman	107	Yamaha		
27	Teleperformance	67	Kirin holdings	108	Yokogawa electric		
28	Thales	68	Komatsu		<i>Spanish companies</i>		
29	Total	69	Kyocera	109	Abengoa		
30	Valeo	70	Minebea	110	Abertis infraestructuras		
31	Veolia environnement	71	Mitsubishi electric	111	Acciona		
32	Vinci	72	Mitsubishi heavy inds.	112	ACS		
33	Vivendi	73	Mitsubishi ufj finl. Group	113	Banco popular español		
	<i>Japanese companies</i>	74	Mitsubishi	114	Bankinter 'r'		
34	Aeon	75	Mitsui chemicals	115	BBVA		
35	Ajinomoto	76	Mitsui osk lines	116	Ebro foods		
36	All Nippon airways	77	Mitsui	117	Endesa		
37	Asahi group holdings	78	Mizuho finl. Group	118	Ferrovial		
38	Asahi Kasei	79	Nissan motor	119	FCC		
39	Astellas Pharma	80	Obayashi	120	Gamesa		

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