

**Corporate Social Responsibility in Western Europe:
An Institutional Mirror or Substitute?**

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**Corporate Social Responsibility in Western Europe:
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Androniki Apostolakou (King's College London)

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Abstract:

In spite of extensive research on corporate social responsibility (CSR) and its link with economic and social performance, less work has investigated the institutional determinants of corporate social responsibility. This paper draws upon recent developments in comparative institutional analysis to compare the influence of different institutional environments on CSR policies of European firms. Using a dataset of European firms, we find that firms from the more liberal market economies of the Anglo-American countries score higher on most dimensions of CSR than firms in the more coordinated market economies in Continental Europe. This result lends support to the view of voluntary CSR practices in liberal economies as being a substitute for institutionalized forms of stakeholder participation. Meanwhile, CSR tends not to mirror more institutionalized forms of stakeholder coordination. Rather, in coordinated market economies, CSR often takes on more implicit forms. Our analysis also shows that national institutional and sectoral-level factors have an asymmetric effect -- strongly influencing the likelihood of firms adopting "minimum standards" of CSR, but having little influence on the adoption of "best practices."

Keywords:

Comparative Analysis of Economic Systems; Corporate Governance; Corporate Social Responsibility; Economic Sociology; Institutions

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1. Introduction

Corporate social responsibility (CSR) is often seen as a response to pressure from outside stakeholders who may be adversely affected by company practices, or as a pro-active attempt by firms to pre-empt or at least mitigate these pressures and enhance the reputation and value of the corporation. In spite of extensive research on CSR and its link with economic and social performance, relatively few studies have investigated the institutional determinants of corporate social responsibility (Jones, 1999; Stanwick and Stanwick, 1998). Institutional theory sees corporations as being embedded in a nexus of formal and informal rules (North, 1990) ranging from coercive political regulation to less formal constraints such as normative pressures to establish legitimacy. According to the so-called “varieties of capitalism” perspective (Hall and Soskice, 2001), national institutional environments differ in the degree of stakeholder involvement and modes of economic coordination in ways that result in two distinct models: liberal market economies (LMEs) of the Anglo-American countries and coordinated market economies (CMEs) in Continental Europe. These institutional differences have also been linked to the forms and extent of corporate social responsibility engagement (Aguilera et al, 2006).

This study examines how sectoral factors and national institutions influence the CSR practices of Western European firms. Using data developed by Sustainable Asset Management (SAM) for screening firms in relation to the Dow Jones Sustainability Indexes, we analyze CSR along three distinct dimensions: economic, environmental, and social. Initially we analyze the effect of country and industry characteristics on the firms’ overall CSR rating and then we proceed in examining each dimension separately. Our findings lend support for the recent thesis of Matten and Moon (2008). They regard CSR as a largely implicit practice in CME countries, but as an explicit attempt to substitute for weak institutions through explicit practices in LME countries. More generally, we argue that contemporary CSR practices may be emerging as a substitute for formal institutions rather than as a mirror of strong stakeholder involvement.

This conclusion must be tempered by caution. Different measures of CSR may better capture different national “styles” of CSR reporting and practices. Our analysis of national patterns must therefore stand up to comparisons with other measures. Still, our findings suggest that contemporary CSR practices may be emerging as a

substitute to more formal patterns of social regulation. CSR practices have a strong inverse correlation with the strength of institutional coordination, regulatory standards and aggregate measures of social and ecological performance. In short, CSR is most likely to be adopted by firms in the most high-impact industries and in European countries with the lowest levels of institutionalized solidarity. To the extent that CSR and institutional coordination develop as competing models in the future, CSR scholars need to shift attention to better understand their respective strengths and weaknesses (Vogel 2006).

2. Theoretical Framework

2.1. Corporate Social Responsibility

Despite a vast and growing body of research, no widely accepted definition of CSR exists. Ever since the term was first used, debates have existed as to its meaning and key elements (Davis, 1973; Frederick, 1986; Wood, 1991; Whetten et al. 2002). One early definition of CSR was proposed concept by Carroll (1979, p. 500), who argued: *“The social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time.”* Others such as Frederick (1986, p.4) later argued that *“the fundamental idea of ‘corporate social responsibility’ is that business corporations have an obligation to work for social betterment.”* Wood (1991) suggested that *“the basic idea of corporate social responsibility is that business and society are interwoven rather than distinct entities; therefore, society has certain expectations for appropriate business behavior and outcomes.”* Other contemporary definitions of CSR reflect a narrowing of the term wherein society is replaced by more proximate stakeholders. Bakker et al. 2005 argue that CSR reflects *“societal expectations of corporate behaviour... that is alleged by a stakeholder to be expected by society or morally required and is therefore justifiably demanded of a business.”* In sum, CSR invokes and overlaps with a number of other concepts used to describe the relationship between business and society (Crane and Matten, 2004), including corporate social responsiveness (Acherman and Bauer, 1976), corporate social performance (Wood, 1991) and stakeholder management (Clarkson, 1995).

While CSR may be defined in terms of societal or stakeholder expectations, this alone tells us little about what actual practices might constitute CSR. This ambiguity or lack of consensus over CSR reflects both its internal complexity, as well as the

essentially contested nature of CSR itself (Okoye 2009). Different social groups or stakeholders may place different expectations on business. These expectations may also differ according to the activities of different firms, and thus differ according to their sector. Perhaps more deeply, the *legitimacy* of stakeholder claims or expectations may differ widely. Even where particular expectations may be seen as legitimate in principle, the boundary is often very unclear as to what social responsibilities should be addressed ‘internally’ through voluntary behaviour by individual firms or ‘externally’ through instruments of public policy, legal regulation, or other formal institutions for reducing externalities or promoting stakeholder involvement (Crouch 2006). Consequently, a universal definition of CSR definition is problematic, particularly given the dramatic institutional differences in national business systems and the resulting differences in the contexts and roles for various stakeholders and hence CSR practices (Matten and Moon, 2008).

2.2 *CSR Measurement as a Social Practice*

CSR is a paradigmatic “social construction.” Hence, we approach CSR by looking at the social practices involved in its definition and measurement in the context of Europe. Indeed, different policy makers and stakeholder groups in Europe have tried to promote competing views and definitions of CSR. The EU Commission (2001) defined social responsibility as “*a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.*” This definition stresses the rather voluntary and explicit elements of CSR, as opposed to other institutionalized forms of regulation.

Parallel to this concept, a growing number of corporations have developed their own approaches to CSR. For example, firms may have policies or report specific non-financial information related to stakeholder concerns. While some of these policies react to pressures from legislation or specific stakeholder demands, European companies have shown a growing awareness of the intangible, non-financial factors influencing their performance. CSR has emerged as a strategic tool for firms to generate and protect their corporate reputation and thereby improve performance. CSR now forms part of risk management activities of firms. CSR is thus part of a wider strategy for developing competitive advantage via building and protecting corporate and brand reputation. Scholars have mirrored this trend with a

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strong research agenda regarding whether and how CSR-related practices lead to specific economic, social and ecological performance outcomes (Wartick & Cochran, 1985; Wood, 1991; Tencati et al. 2004)).

The measurement of CSR remains a rather elusive task. Researchers have yet to achieve a consensus regarding the validity of various measures (Mattingly and Berman, 2006; Fryxell and Wang, 1994; Waddock and Graves, 1997; Tuzzolino and Armandi, 1981; Abbott and Monsen, 1979). Several approaches have been used to measure CSR: evaluations by industry experts, the use of single-issue and multiple-issue indicators, and surveys of managers, each with their own limitations (Maignan and Ferrell, 2000; Graafland et al. 2004). Nonetheless, a growing demand exists among practitioners for ratings and metrics of corporate social responsibility. Stakeholders, such as NGOs and lobbying groups, have tried to develop metrics for compliance on particular issues. But investors are also beginning to use CSR performance indicators (Marquez and Fombrun, 2005).

While different measures may have their respective strengths and weaknesses with regard to different dimensions (or definitions) of CSR, we are interested by the use of these measures by stakeholders as a *social practice*. As measures are generated and reported to the public, actors begin to orientate their actions around them and firms may even begin to design their CSR policies to explicitly improve their performance according to these measures. As will be discussed below, this study adopts a measure of CSR that is widely used by the investor community and underlies the rankings of the Dow Jones Sustainability Index.

2.3. Sectoral and Institutional Determinants of CSR

Why do firms adopt CSR? Or put another way, what makes some firms more likely to adopt CSR practices than other firms? Most research has focused mainly on the links between corporate social responsibility and financial performance (Anderson and Frankle, 1980; Ingram and Frazier, 1983; McGuire et al., 1988; Starik and Carroll, 1990) as well as the relationship between a firm's internal characteristics and its external social performance (Bhambri and Sonnenfeld, 1988; Graves and Waddock, 1994). This literature assumes largely instrumental motives may drive the adoption of CSR practices, in an effort to reduce reputational risk and improve financial performance. However, other motives may be more normative or moral in nature. Here companies may develop CSR as a response to wider social and institutional

pressures (Aguilera et al 2007). However, so far little work has been conducted to investigate systematically the institutional determinants of corporate social responsibility. Institutional theory sees corporations as being embedded in a nexus of formal and informal rules ranging from coercive political regulation to less formal constraints such as normative pressures to establish legitimacy (DiMaggio and Powell 1991).

Many direct pressures for firms to adopt CSR practices manifest themselves at the level of industrial sector (Beliveau et al. 1994, Venanzi et Fidanza, 2006). Since firms operating in the same industry face similar challenges, common CSR patterns and regulations are likely to develop, affecting CSR standards and forcing CSR policies implemented by firms in those industries to converge. In other words, sectors represent an important boundary of institutional fields (DiMaggio and Powell 1991). Consumers and NGOs will behave differently across sectors; depending on how risky each sector is perceived by the society while internal actors (namely managers) in some sectors might have more to gain by instrumentally by adopting CSR. For example, oil companies are perceived by consumers and NGOs as highly risky in terms of environmental issues as well as employee health conditions, thus these actors are more likely to pressure the oil companies to adopt CSR policies. In addition these companies might have more to gain by being proactive and choosing themselves – in other words controlling – the standards by which they have to comply rather than leaving this responsibility to the state. Precisely because of their impact to the society and the attention they capture among various stakeholders, these industries are better regulated and therefore companies within them will tend to adopt more codified and explicit CSR policies, either as a result of their own reaction to consumer's pressures or because they are obliged by government measures.² To test the influence of sectoral environments on CSR, our first hypothesis can therefore be stated like this:

H1: Firms operating in sectors with higher impacts on stakeholders will adopt more extensive CSR practices relative to firms operating in sectors with lower impacts on stakeholders.

² An important qualification to our analysis is that these firms may not actually perform better in terms of objective CSR outcomes. For example, firms in these industries may not actually be less polluting than firms in other sectors. Rather, we are looking at CSR here only in terms of formal policies without regard to their ultimate effectiveness.

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According to the varieties of capitalism theory (Hall and Soskice, 2001) different institutional systems in various countries lead to comparative institutional advantages for those corporations that operate within them. Corporate governance systems can differ among different countries, as they are being shaped by pressures from nationally distinct institutional environments. Two distinct models of corporate governance are usually contrasted: liberal market economies (LME) in the US or UK and coordinated market economies (CME) in Continental Europe or Japan (Hall and Soskice, 2001). The former is characterized by equity financing, dispersed ownership, active markets for corporate control and flexible labour markets, whereas the latter by long-term debt finance, ownership by large block-holders, weak markets for corporate control and rather rigid labour markets. Distinct national business systems and corporate governance systems, in which firms are embedded, are also likely to influence the degree and strength of the internal and external pressures the firm will face to engage in social responsibility initiatives (Logsdon and Wood, 2005; Matten and Cane, 2005) The reasons that motivate a company to engage in CSR activities include factors at the micro, meso, macro and supra levels³, involve multiple actors – each one with a different set of motives – and range from reaction to pressures from stakeholders to proactive strategies to influence the latter (Aguilera et al., 2007).

Differences in corporate governance systems will be reflected in and influence corporate social responsibility systems (Aguilera and Jackson, 2003; Aguilera and Cuervo-Cazurra, 2004). Linking national differences with CSR outcomes, Campbell (2007) argues that companies are more likely to behave in socially responsible ways when they belong to trade or employee associations and when they are engaged in institutionalized dialogue with unions, employees and other stakeholders. Taking into consideration that such characteristics are most common in CME countries, if CSR acts largely as a mirror of institutional regulation, we make the following hypothesis:

H2: Firms operating in CME countries will adopt more extensive CSR practices relative to similar firms operating in LME countries.

Matten and Moon (2008) offer another perspective on national differences in CSR. Their framework stresses the implicit-explicit dimension of CSR practices. Explicit

³ Known differently as Individual, organizational, country and transnational levels

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CSR is used to describe CSR manifest in the form of corporate activities, mainly voluntary policies and strategies, motivated by perceived expectations of different stakeholders of the company. Implicit CSR consists of values, norms and rules, usually codified and mandatory, emerging from the society itself and its expectations on the role of the corporation. The predominance of one element over the other depends once again on the national business system that shapes the environment in which the corporation operates.

Corporations in national business systems which favor the explicit element of CSR are vocal about their CSR initiatives and make sure on their reports that they use the language on CSR in order to properly communicate their activities to their stakeholders. On the other hand, corporations which operate in business systems with strong implicit elements of CSR, often in the form of laws and regulations, do not describe those CSR related activities as they feel there is nothing extraordinary in following the law. Of course, Carroll mentioned (1979) the fact that a corporation may comply with the regulations but not claim distinctive authorship of CSR practices, and still be acting responsibly. The stricter the regulations are in a country in issues related to CSR, the less scope exists for corporations to develop policies to promote CSR and the smaller is the need to communicate those. In these cases the state and the societal consensus define the role and contributions to society of each major stakeholder. However, if regulations are more minimal, more room exists for corporations to take CSR related initiatives and greater pressure may come from stakeholders towards the development of company-level CSR practices. In such environments corporations have a chance to differentiate themselves from their peers, thus the adoption of CSR communication language in reports in order to properly advertise their policies. If CSR acts largely as a substitute for more formal, institutionalized forms of regulation, we hypothesize that:

H3: Firms operating in LME countries will adopt more extensive and explicitly measurable CSR practices than firms in CME countries, where CSR will be less extensive or take on more implicit forms.

In order to further test whether CSR patterns mirror regulatory institutions or act as potential substitutes, we specify an additional set of hypotheses. Rather than looking at CSR and national systems in their totality, we disaggregate the logic of the

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institutional argument into more specific dimensions related to the economic or capital market-oriented dimensions of CSR relative to the more social or employee-oriented aspects . Looking at formal legal institutions, these should have a direct influence on firm-level practices and consequently provide a strong test as to whether CSR patterns along the relevant dimension mirror or substitute for formal institutions. If CSR mirrors regulatory institutions, we make the following hypothesis:

H4a: Firms in countries with strong investor protection laws will adopt more extensive practices related to the economic dimension of CSR, and less extensive practices related to the social dimension of CSR.

H4b: Firms in countries with strong employment protection laws will adopt less extensive practices related to the economic dimension of CSR, but more extensive practices related to the social dimension of CSR

If CSR practices are largely adopted as a substitute for formal regulation, we make the following hypotheses:

H5a: Firms in countries with strong investor protection laws will adopt less extensive practices related to the economic dimension of CSR, and more extensive practices related to the social dimension of CSR.

H5b: Firms in countries with strong employment protection laws will adopt more extensive practices related to the economic dimension of CSR, but less extensive practices related to the social dimension of CSR

3. Research Methods

Empirically, the paper investigates the sectoral and national patterns of CSR adoption using data on corporate social performance obtained from Sustainable Asset Management (SAM), an independent asset management company headquartered in Zurich. This data is also used in the screening, and selection of firms for the Dow Jones Sustainability Indexes (DJSI). For each company, the scores develop by SAM are derived from various input sources, including an online questionnaire, submitted

documentation, policies and reports, publicly available information and SAM Research analyst's direct contact with companies. Figure 1 shows the criteria used for each dimension of corporate social responsibility. Companies are scored on each dimension separately, as well as given an overall score for CSR based on a scale of 0 (poor) to 100 (excellent). The economic dimension of CSR reflects policies toward market actors, such as investors and customers, and elements of transparency as part of corporate governance. The environmental dimension of CSR reflects policies, disclosure and performance on a wide range of environmental indicators. The social dimension of CSR reflects engagement with domestic and overseas employees, as well as a number of high performance human resource management practices and engagement with society through philanthropy and other means.

Figure 1: Criteria of CSR dimensions

Dimensions	Criteria
Economic	Codes of conduct / corruption
	Corporate governance
	Risk and crisis management
	Investors relations
	Customer relationship management
Environmental	Environmental performance / eco-efficiency
	Environmental policy and management
	Environmental reporting
Social	Labour practice indicators
	Human Capital Development
	Talent attraction and retention
	Stakeholder engagement
	Corporate citizenship / philanthropy
	Social reporting

In order to include control variables (see below) on size and past financial performance, we followed the example of previous studies. Data for size and financial performance were gathered from Amadeus and the Thomson Banker One database respectively. After eliminating those firms for which the accounting data were not available, the sample used in this study consists of a total of 274 companies.

Sector. In order to measure the effect of sector, sample firms were grouped into 10 categories, following the Industry Classification Benchmark (ICB) system. The ICB system is a detailed and comprehensive structure for sector and industry

analysis, facilitating the comparison of companies across four levels: 10 industries, 19 supersectors, 39 sectors and 104 subsectors (ICB, 2007). After coding each firm into the ICB supersector, we grouped these sectors into three broad industry groups based on the ecological impact of the sector: low impact, medium impact, and high impact. For this categorization, we used the sector allocation of the FTSE4Good indices which measures the ecological footprint of their activities (citation).⁴

National Business Systems. In order to examine our hypotheses about the institutional environment, we undertook a comparison of firms across different groups of countries. At the national level, sample firms were grouped into in four country categories: Anglo-Saxon countries (UK, Ireland), Nordic countries (Sweden, Norway, Finland, Denmark), Central European countries (Switzerland, Netherlands, Germany, Belgium, Austria) and Latin countries (Spain, Portugal, France, Italy, Greece) following the distinction presented in Midttun et al (2006) and Hall and Gingerich (2004). In order to refine these comparisons, we also utilized the coordination index of Hall and Gingerich (2004), which gives an interval measure of coordination across countries. Following the varieties of capitalism theory, this index evaluates the level of market coordination in countries based on a set of variables such as shareholder power, dispersion of control, size of stock market and level of wage coordination. The authors standardize the scores to vary between 0 and 1, with higher values indicating a greater degree level of coordination as in CMEs and lower values in LMEs. Table 1 summarizes the overall distribution of our sample in terms of the ICB super-sector and country or type of national business system.

INSERT TABLE 1 HERE

To more directly test the influence of institutions, we also explore two other regulatory institutions: investor protection and employment protection. The investor protection index gives an indication of the level of shareholder rights according to the law (LLSV 1999). As argued with regard to Hypothesis 5, countries with higher levels of investor protection are expected to adopt more shareholder-oriented corporate governance and hence may be more likely to adopt CSR practices related to

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http://www.ftse.com/Indices/FTSE4Good_Index_Series/Downloads/FTSE4Good_Climate_Change_Criteria.pdf

the economic dimension, such as market-oriented disclosure and principles of transparency toward investors. We also look at the OECD index of employment protection (OECD various years). The legal regulation of employment should influence the social dimension of CSR, which reflects the strength of human resource development and positive labour standards adopted by firms.

Control Variables. Our analysis considers other firm-level variables known to influence CSR. In particular, firm size and financial performance have been shown to influence corporate social performance in previous studies, and these characteristics were included here as control variables. Larger firms are likely to receive greater scrutiny from the general public, government and various NGOs, which may encourage them to have a more explicit CSR strategy and achieve higher levels of corporate social performance. In addition, larger firms are more likely to have discretionary resources to allocate to social responsibility. We measure a company's size by the value of annual turnover (year ending March 2007).

Likewise, past research on financial performance has been inconclusive as to whether CSR is associated with positive, negative or even neutral outcomes (Vogel 2006). Even though we feel that there is a mutual causal relation among those two variables⁵, we treat financial performance as the independent variable that may influence the extent of CSR practices. In particular, we posit that firms with higher financial performance will be more inclined to address issues of CSR in its strategy. Policies and expenditures, particularly in discretionary areas such as social and environmental programs, tend to be rather sensitive to the existence of slack resources (McGuire et al. 1988). If CSR is considered a costly choice, firms with relatively low financial performance in the past may be less willing to absorb these costs whereas more profitable firms will be more willing to undertake socially responsible actions, especially if their managers recognize the further benefits CSR may have for future financial performance (e.g., lower financial risk, employee motivation, customer and investor's satisfaction). We use return on assets (ROA) as a proxy for firm financial performance.

Past literature on CSR has posits an additional 'globalist hypothesis', which sees CSR as being positively related to the degree of internationalization (Gjoberg 2007). Our analysis initially included measures of foreign assets as a proportion of total

⁵ High levels of CSR may be positively related to high levels of financial performance and vice versa, in a rather reinforcing relation.

assets, as well as a measure of the percentage of foreign sales. These variables did not prove to be significant in any of our models. One plausible reason is that firms within our dataset are all relatively large and export-oriented, and thus the average proportion of foreign assets was near to 50%. In short, most of the firms in the analysis are highly international and the degree of variability in the sample was low. Hence, the data do not offer a strong empirical test of the globalist hypothesis. For this reason, we do not report these results here, as this variable increases the number of missing cases in our dataset.

4. Empirical Results

Comparison of means. The CSR ratings used in the study display some negative skewness for the overall scores, as well as in the social and environmental dimensions. Table 2 provides a formal test for the normal distribution that reflects the distributions also shown in Figure 2. This non-normal distribution is substantively interesting, as it suggests that firms either adopt a wide range of CSR practices or they refrain from adoption. In short, firms do not cluster around some single ‘average’ level of CSR. This distribution complicates our analysis somewhat, since caution must be exercised in applying statistical analysis such as ANOVA and regression. Therefore, where indicated, we also utilize non-parametric tests to examine differences of means, such as the Mann-Whitney test or Kruskal Wallis test. These tests use the respective ranks, since a non linear relationship can be hypothesized between these variables. These tests do not require assumptions about the shape of underlying distribution.

INSERT TABLE 2 HERE

Table 3a shows the breakdown of CSR scores by the degree of impact in each sectoral group. Overall CSR scores were nearly 10 points higher in high impact sectors than in the medium/low group of sectors. In order to compare further these differences in the level of CSR, we performed both an ANOVA test and a non-parametric test of rank order differences (Mann-Whitney test). The results of both analyses were consistent, and demonstrate significant differences for all CSR scores.

The country patterns are somewhat less uniform. Table 3b shows LME countries scored significantly higher than CME countries on the overall CSR score, as

well as on the social and environmental dimensions. However, no significant differences exist between LME and CME countries on the economic dimension of CSR.⁶ These results hold for both the non-parametric test and ANOVA. Table 3c provides an alternative analysis based on a geographic grouping of countries, which breaks the CME group down into Central, Nordic and Latin sub-groups. No significant differences exist across country groups for either overall CSR or the economic dimension. However, both tests shows that countries differ clearly in terms of the social dimension, where the Nordic companies scored lowest, followed by the Central countries and Latin countries respectively. Finally, countries also differ along the environmental dimension, where the Anglo countries score significantly higher than the Nordic or Latin groups. Notably, the three CME groups very nearly follow a rank order across all dimensions of CSR with Anglo countries scoring highest, the Central countries being second, and these are followed by rather lower scores in Latin countries and Nordic countries scoring the lowest on all dimensions of CSR.

INSERT TABLE 3 HERE

Regression and Logit Analysis. Table 4 presents a correlation matrix among the CSR variables, sectoral indicator, and institutional variables. In order to test our hypotheses and consider the influence of other variables such as firm size and performance, we undertook a further analysis using regression and logit models. Given the negatively skewed distribution of our dependent variable, we utilized a log transformation of the CSR scores in doing our analysis. We found that the direction and significance of the results did not differ substantively from the analysis done without transformations. Hence, we will restrict ourselves here to presenting the non-transformed results for ease in interpretation. In the subsequent analysis, we will also confirm the robustness of our results by using an alternative model specification. Specifically, we use a logit model to estimate the log odds of firms being among the

⁶ Additional analysis was done on the selected component scores for the economic, social and environmental sub-indices for which we have data made available from SAM. Significant differences were found among all dimensions apart from risk and crisis management, as well as human capital development. The largest difference related to corporate philanthropy, where LME firms scored 21 points higher on average relative to their CME counterparts. The detailed comparison across individual components and their relationship to institutional diversity is an important avenue for future research. However, the initial results of this study suggest that national differences are fairly robust relative to the different dimensions or specific aspects of CSR with some exceptions noted above.

high-CSR and low-CSR firms respectively. To define these groups, we take the top 20% and bottom 20% of firms.

INSERT TABLE 4 HERE

Table 5 presents the main results of the regression analysis. As we expected, size had a positive influence on CSR scores, both overall and individually for all three dimensions of CSR. ROA displayed a negative relationship with CSR scores, although this variable was only statistically significant for the economic dimension of CSR. This result contradicts our expectation that CSR is positively associated with stronger firm performance or that firms with stronger performance may have more discretionary resources that are invested in the adoption of CSR policies. However, given the complexity of this relationship, we do not have enough evidence to further interpret this relationship.⁷ We explored H1 by using a dummy variable comparing high impact sectors (1) to medium and low impact sectors (0). The results here were strongly significant and consistent with our hypothesis – namely, firms in high impact sectors have higher CSR scores than firms in other sectors. The size of this effect was substantial. Overall, firms from high impact sectors scored approximately 9 points higher on their overall CSR scores than those from medium or low impact industries. The size of effect was largest for the environmental dimension of CSR, followed by the social dimension and dimension respectively.

We tested the country patterns by using national-level scores on the Hall and Gingerich ‘coordination index’. The results suggest that firms from coordinated market economies (with high coordination scores) have significantly lower CSR scores than firms from more liberal market economies. This pattern holds over all three dimensions of CSR. The size of this effect was also quite large, being similar or greater in strength than differences across sectors. For example, taking the two paradigmatic cases of Germany (coordination score = 0.95) and the UK (coordination score 0.07), our model estimates German firms to score 10.1 points lower on overall CSR than UK firms. The strength of these effects is even larger for both the social and environmental dimensions of CSR. Although the differences in the economic dimension of CSR are significant, the difference in scores is substantially smaller than

⁷ One possible interpretation may be that strong performance increases the autonomy of firms and decreases their resource dependence and possible vulnerability to demands from outside stakeholders.

on the other dimensions. Overall these results are inconsistent with our first institutional hypothesis H2, which suggested that the degree of stakeholder coordination would have a positive influence on CSR policies. These results do lend support for the idea that CSR practices in CME countries may potentially be more implicit rather than explicit as in LME countries, as suggested in H3.

INSERT TABLE 5 HERE

Tables 6 and 7 present a further analysis using a logit model to predict the likelihood of a firm being in the top 20% of high CSR adoption or the bottom 20% of low CSR adoption. Dichotomizing our dependent variable into high and low scores is intended as an additional check on the robustness of our results, since the distribution of CSR scores is negatively skewed. In addition, we have a substantive reason for looking at firms at the top and bottom of the distribution. Institutions may have an asymmetric influence that differs at each end of the spectrum. Institutional support for CSR may help to set and raise ‘minimum standards,’ and hence strong institutional support for CSR may decrease the likelihood of being among the bottom group of firms. Conversely, national institutions may have a weaker influence of adoption of ‘best practices’, where particular firms are among the top group and act as leaders in adopting of new or very high CSR standards.

Table 6 shows the results for firms with low CSR scores. As we expected, larger firms are less likely to have low CSR scores. In line with the regression results, firms with higher ROA are more likely to be among the firms with low scores on the economic dimension of CSR. The results for industrial sector are also consistent with the regression analysis. Firms in high impact industries are less likely to have low CSR scores overall. Firms in these industries may face strong pressure to adopt some minimum standard of environmental policies. However, industrial sector had the largest influence on the environmental dimension of CSR – which may likely reflect that our measure of sectoral impact is based on firms’ ecological footprint. Turning to institutional coordination, the results were also largely consistent with the previous regression analysis. Firms from countries with high coordination scores were more likely to be among those with low CSR scores, particularly in relation to the social dimension of CSR. Overall, these results lend support to H3, which suggests that firms in CMEs may rely on more implicit policies and institutionalized routines rather

than adopting explicit CSR policies. The logit results indeed suggest that more of these firms fall into the group of firms with the lowest standards of CSR, suggesting the non-adoption of ‘minimum standards’ relative to other firms.

Table 7 presents the results for firms with high CSR scores. Here we examine factors that may influence firms adopting above-average levels of CSR. Here we are concerned with factors leading firms to adopt ‘best practices’ or even engage in pioneering efforts regarding CSR. It is worth noting that the overall strength of the logit models is much weaker than in the previous analysis of firms with low CSR scores, and pseudo-R² scores become very weak for the social dimension and the environmental dimension of CSR. As in previous analysis, size had a positive influence on the likelihood of adopting high CSR scores across all dimensions. Firm performance had no significant influence on the adoption of high CSR. Since performance has no influence on adopting high levels of CSR, this finding is inconsistent with the idea of high performing firms using discretionary resources to adopt high levels of CSR. However, we note that the relationship between performance and ROA is complex and warrants more investigation in future research.

Turning to industrial sector, firms in high impact sectors were more likely to adopt high CSR scores across all dimensions. As noted above, the strength of these effects was much smaller than the analysis of low CSR scores. Sector may therefore have an asymmetric influence, encouraging the adoption of minimum environmental standards, but doing less to explain why firms adopt best practices. Finally, firms from countries with high levels of coordination were less likely to adopt high scores for the economic and social dimension of CSR. Again, the result appears consistent with H3 and the idea of implicit CSR practices. However, coordination had no significant influence on the environmental dimensions of CSR. The institutional environment of CMEs, therefore, does not seem to act as a constraint on the adoption of best practices even if it does less to encourage the adoption of minimum standards relative to LMEs.

Table 8 presents a further logit analysis on the likelihood of having low CSR scores, but utilizing a more direct test of the relationship between investor protection and employment protection laws on the social and economic dimensions of CSR (Hypotheses 4 and 5). Interestingly, neither the degree of investor or employment protection had a significant influence on the economic dimension of CSR. We do find that stronger investor protection reduced the likelihood of having low CSR scores

on the social dimension. Meanwhile, employment protection had no influence on the social dimension. Taken together, these results are inconsistent with the idea of CSR acting as an institutional mirror (H4). The evidence regarding H5 is interesting, even if not entirely straight forward. While we expected that low employment protection might lead to stronger adoption of CSR along the social dimension, this was not the case. Rather, firms exposed to strong investor protection seemed to compensate for this by adopting higher CSR along the social dimension. It is also interesting that strong employment protection did not produce a symmetric counterbalancing adoption of higher standards on the economic dimension of CSR. This asymmetric pattern suggests that orientation toward investors may be driving a substantial part of the CSR agenda, and leading firms to trade greater shareholder orientation for voluntary acceptance or adoption of social standards through CSR programs.

5. Discussion

Our paper explores the sectoral and national institutional determinants of firms' adoption of CSR practices. We find a very strong and robust influence of sectoral-level factors as consistent with H1 – firms in high impact industries respond by adopting more extensive CSR practices. This finding suggests that CSR is adopted by firms as a way of managing their reputation and seeking to address the expectations of stakeholders. While firms in high-impact sectors were less likely to be among low CSR performers and more likely to be among high CSR performers, the influence of sector on high CSR performance was much weaker than on low performance. Sector-level dynamics may thus be very important in the diffusion of 'minimum standards' for CSR, where firms respond to coercive pressures of regulatory standards or mimetic pressures to imitate their competitors (DiMaggio and Powell 1991). Further research is needed to understand what other firm-specific factors may be important in understanding why particular firms become genuine 'leaders' in CSR.

Turning to national patterns, we find that the degree of coordination has a negative influence on CSR overall, although this effect is largely related to the social and environmental dimensions of CSR. Our results suggest that high institutionalized coordination among stakeholders does not lead to higher levels of CSR. Contrary to our second hypothesis (H2) positing that institutions supporting stakeholder involvement strengthen CSR practices, we find higher levels of adoption of CSR

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among firms in more liberal market economies, where stakeholder coordination is weaker. CSR practices thus do not mirror the level of institutionalized participation of stakeholders. Rather, these results are consistent with H3, which suggests that institutionalized coordination may substitute for explicit CSR practices since the involvement of stakeholders may remain a more implicit practice in these contexts. In other words, firms in CME countries may rely on 'implicit' forms of CSR that are embedded within high levels of formal and informal societal regulation. Interestingly, this institutional effect is much stronger in terms of minimum standards (low CSR firms) than best practices (high CSR firms).

The comparative analysis supports the notion that CSR, broadly speaking, is may be associated with the attempts of firms to compensate for institutional voids or substitute for formal institutions, rather than acting as a mirror of institutionalized forms of participation or 'best practice' in terms of outcomes. Further evidence for this point was the strong relationship between higher legal protection for investors and the increased likelihood of adopting minimum standards along the social dimension of CSR. But is the logic of substitution a plausible explanation for why UK firms have emerged as clear European 'leaders' in CSR within Europe, and why firms in Germany or Nordic countries seem to be lagging behind?

Some recent qualitative and historical analyses of CSR does support this conclusion. The emergence of CSR in the UK grew rapidly in the wake of Thatcherism, starting in the mid-1980s and into the 1990s. The economy underwent wide-ranging deregulation and retrenchment of the post-war social compromise. Corporate tax rates were also cut dramatically, leading to change in state intervention toward more public-private partnerships and also reacting greater social expectations and scope for businesses to get involved in the support of social and other charitable programs. Reforms were undertaken in 1986 and 1991 to increase corporate giving in the UK, and led to a vast expansion of charitable contributions (Brammer and Millington 2003; Brammer and Pavelin 2005). These new forms of corporate involvement share important characteristics of patron-client relations, such as particularistic patterns of engagement and an unequal distribution of resources between corporation and civil society organization (Jones 2007). But CSR activities have nonetheless changed the frame of discourse and do involve tangible obligations for firms toward particular stakeholders. As such, CSR is not a mere expression of corporate power but a new form of negotiated social compromise.

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The important point here is that CSR may be emerging as an alternative or even substitute for more formal and universalistic patterns of institutional regulation and social coordination. Kinderman (2009) has studied parallel pattern of emerging CSR and erosion of the post-war social compromise by looking at the diffusion of business associations promoting CSR across countries and over the period 1997 to 2007. He finds that the emergence of national associations promoting CSR is associated with decreases in centralized wage bargaining, tax rates, and social expenditures. For example, Germany is often portrayed as a “laggard” on CSR issues (Habisch, Jonker et al. 2004). On one hand, the favourable economic climate relative and high level of social integration have potentially slowed public demands for CSR. But German firms have also proven to have a highly ambivalent stance toward CSR initiatives. Based on an extensive analysis of business association publications and public statements, Kinderman concludes that, “the consequence of the stringent standards of binding regulation in Germany is that German business-led CSR takes on a distinctively libertarian meaning: responsibility yes, but in exchange for great freedom” (Kinderman 2008). CSR initiatives in Germany have gone hand-in-hand with calls for deregulation or positions against social partnership.

While the evidence presented in this paper gives strong support to the idea of CSR as a substitute for formal regulation and consistent with some other empirical studies (Igalens, Dejean et al. 2008), we also emphasise that the story presented is not conclusive. The national patterns of CSR are likely to be sensitive to the particular measure and alternative methodologies may result in different rank orders among European countries based on different sets of CSR indicators. For example, another recent study ranks Nordic firms as being much higher based on alternative sets of indicators and finds some alternative support for the institutions as ‘mirror’ argument (Gjoberg 2007).⁸ Other studies find that whether CSR is enabled or constrained by national institutions depends on the particular dimension of CSR in question, as well as the particular institutions in a country (Balzer, Gazdar et al. 2007; Gond, Egri et al. 2008). National comparisons will be sensitive to different measures of CSR, due to the fact that institutions may lead to different ‘styles’ of CSR reporting that reflect the

⁸ This same study also finds the UK to have a high CSR ranking, but argues that the UK case may be explained with regard to the so-called globalist hypothesis due to the high outflow of FDI and proportion of transnational firms.

salience of different stakeholders or policy issues in different countries (Amaeshi 2008; Chen and Bouvain 2008).

These challenges in measuring CSR and understanding its relation to institutions point to an important agenda for comparative studies to better understand CSR in terms of its different dimensions. The significance of our particular study lies in the fact that our measure of CSR is one widely used by investors to judge company-level CSR engagement. If CSR is an essentially contested concept, it is important to see how key actors like investors socially construct CSR in practice due to the strong economic and social implications of these views. One implication of our results is that investor-driven engagement on CSR issues are very sensitive toward the more explicit practices and policies adopted by UK firms. Other studies are needed to confirm whether firms in CME countries may be employing other more implicitly CSR-related policies through other channels. Nonetheless, some irony remains in the fact that UK firms operating in high liberal institutional environments have emerged as pioneers of CSR within Europe despite the lack of institutionalized coordination and well known focus on 'shareholder value' as a core principle of corporate governance in contrast with other more stakeholder-oriented approaches. But even if the origins of CSR among UK firms have largely instrumental motives, CSR may nonetheless become increasingly institutionalized as these policies lead to intended and unintended forms of engagement with a wider set of actors, establishing new relational motives for CSR and possibly even ultimately establish new moral motivations as well (Aguilera et al. 2006). Similarly, one cannot rule out the growing adoption of more explicit CSR practices across CME countries, as these learn and imitate UK firms in search of similar instrumental benefits.

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Table 1: Distribution of the Sample by Sector and Country Group

	LME	CME			Total	
	Anglo	Central	Latin	Nordic		
High Impact Industries						
Automobiles	1	3	3	0	7	2.6%
Basic Resources	3	2	1	4	10	3.6%
Chemicals	2	9	2	0	13	4.7%
Construction & Materials	2	6	6	1	15	5.5%
Food and Beverage	2	4	2	1	9	3.3%
Oil and Utilities	3	0	5	2	10	3.6%
Retail	2	1	1	1	5	1.8%
Utilities	5	3	13	1	22	8.0%
Medium to Low Impact Industries						
Banks	5	11	18	5	39	14.2%
Consumer goods	4	3	3	2	12	4.4%
Consumer services	5	1	2	1	9	3.3%
Financials	7	3	3	1	14	5.1%
Insurance	4	9	3	2	18	6.6%
Media	8	1	2	1	12	4.4%
Technology	0	6	2	1	9	3.3%
Telecommunications	2	3	6	4	15	5.5%
Travel & Leisure	5	2	4	0	11	4.0%
Mixed Industries¹						
Health Care	3	3	2	5	13	4.7%
Industrials	8	9	6	8	31	11.3%
Total	71	79	84	40	274	
	25.9%	28.8%	30.7%	14.6%		

Notes: Anglo: UK (69), Ireland (2). Central: Austria (5), Belgium (5), Germany (33), Netherlands (15), Switzerland (21). Latin: France (38), Greece (4), Italy (19), Spain (19), Portugal (4). Nordic: Denmark (6), Finland (11), Norway (6), Sweden (16).

¹ Mixed industries have sub-sectors classified within both high and medium/low impact activities.

Table 2: CSR Scores, Tests of Normality

Variable	Pr(Skewness)	Pr(Kurtosis)	adj chi2	Prob>chi2
csr	0.001	0.302	10.43	0.0054***
csrecon	0.063	0.600	3.76	0.1527
csrsoc	0.012	0.020	10.45	0.0054***
csrenviron	0.000	0.896	15.76	0.0004***

*** Significant at 0.001. Reject the hypothesis of normal distribution

Figure 2: Normal distribution histograms

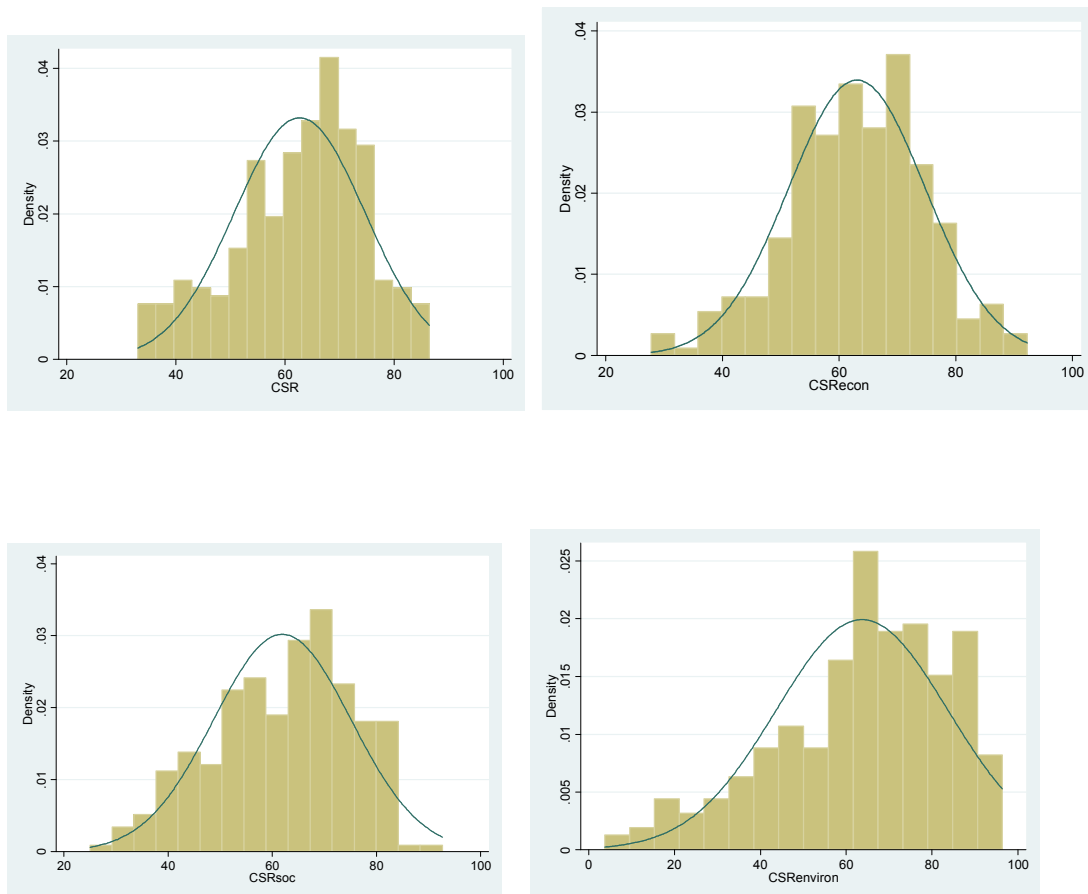


Table 3a: CSR Scores by Industry Group

Industry group	N	CSRtotal	CSReco	CSRsoc	CSRenv
Medium/low impact	156	58.51	60.27	58.47	56.80
High impact	118	68.25	66.78	65.50	72.80
Mann-Whitney	Z	-6.89	-4.11	-5.11	-6.50
	Significance	0.000***	0.000***	0.000***	0.000***
ANOVA	F	52.57	22.25	27.23	50.76
	Significance	0.000***	0.000***	0.000***	0.000***

Table 3b: CSR Scores by Coordination Country Group

	N	CSRtotal	CSReco	CSRsoc	CSRenv
LME	71	65.6	62.3	66.6	69.5
CME	203	61.7	63.4	60.3	61.7
Mann-Whitney	Z	-2.20	0.72	-3.42	-2.47
	Significance	0.028*	0.470	0.000***	0.014**
ANOVA	F	5.54	0.47	12.68	8.19
	Significance	0.019*	0.495	0.000***	0.005**

Table 3c: CSR Scores by Regional Country Group

	N	CSRtotal	CSReco	CSRsoc	CSRenv
Anglo	71	65.6	62.3	66.6	69.5
Central	79	63.0	65.8	60.9	62.6
Latin	84	61.3	62.2	60.9	61.0
Nordic	40	60.1	61.0	57.8	61.3
Kruskal-Wallis	Chi-square	7.09	5.36	13.33	7.21
	Significance	0.069	0.147	0.004**	0.066
ANOVA	F	2.41	2.11	4.85	2.81
	Significance	0.068	0.099	0.003**	0.040*

Table 3d: CSR Scores by Country

	N	CSR	CSR Economic	CSR Social	CSR environmental
LME					
Ireland	2	48.5	46.7	49.8	47.2
		<i>21.9</i>	<i>19.3</i>	<i>19.5</i>	<i>29.0</i>
United Kingdom	69	66.1	62.7	67.1	70.1
		<i>9.4</i>	<i>12.3</i>	<i>10.8</i>	<i>14.8</i>
CME - Central					
Austria	5	49.3	55.3	46.4	69.5
		<i>8.9</i>	<i>8.4</i>	<i>3.8</i>	<i>15.5</i>
Belgium	5	63.1	67.7	60.9	46.0
		<i>5.6</i>	<i>9.0</i>	<i>5.3</i>	<i>24.2</i>
Germany	33	61.8	64.7	60.5	57.7
		<i>14.2</i>	<i>9.3</i>	<i>16.3</i>	<i>15.5</i>
Netherlands	15	67.6	70.4	64.7	61.0
		<i>14.8</i>	<i>15.7</i>	<i>16.0</i>	<i>24.2</i>
Switzerland	21	64.8	66.3	62.2	68.1
		<i>14.3</i>	<i>12.5</i>	<i>13.7</i>	<i>21.0</i>
CME- Latin					
France	38	62.6	61.8	62.0	66.3
		<i>9.9</i>	<i>10.8</i>	<i>9.9</i>	<i>24.1</i>
Greece	4	47.7	55.3	48.8	62.6
		<i>10.0</i>	<i>12.9</i>	<i>3.1</i>	<i>23.2</i>
Italy	19	55.8	59.9	54.1	66.1
		<i>12.4</i>	<i>9.9</i>	<i>13.5</i>	<i>18.4</i>
Portugal	4	63.6	61.5	64.5	35.1
		<i>4.8</i>	<i>13.7</i>	<i>6.1</i>	<i>20.6</i>
Spain	19	66.3	67.1	67.3	52.7
		<i>9.9</i>	<i>9.3</i>	<i>11.1</i>	<i>22.8</i>
CME-Nordic					
Denmark	6	62.7	61.4	65.0	65.1
		<i>12.7</i>	<i>6.9</i>	<i>15.8</i>	<i>21.4</i>
Finland	12	60.9	60.8	57.8	63.5
		<i>12.2</i>	<i>12.3</i>	<i>10.7</i>	<i>15.4</i>
Norway	6	68.1	68.7	69.0	61.0
		<i>10.9</i>	<i>13.3</i>	<i>12.7</i>	<i>20.2</i>
Sweden	16	55.6	58.1	50.9	61.4
		<i>10.7</i>	<i>11.4</i>	<i>12.2</i>	<i>21.7</i>

Notes: Mean scores (standard deviations in parentheses).

TABLE 5: OLS REGRESSION ANALYSIS OF SECTOR AND INSTITUTIONAL COORDINATION ON CSR

	CSR total		CSR economic		CSR social		CSR environmental	
Logarithm of Turnover	3.50 (0.44)	0.000***	3.58 (0.47)	0.000***	3.10 (0.52)	0.000***	3.71 (0.77)	0.000***
ROA	-0.05 (0.10)	0.593	-0.19 (0.10)	0.067*	-0.14 (0.11)	0.229	-0.23 (0.17)	0.172
High impact industry (dummy)	9.18 (1.56)	0.000***	6.57 (1.31)	0.000***	7.91 (1.46)	0.000**	14.04 (2.15)	0.000**
Coordination Index	-11.47 (2.01)	0.000***	-5.51 (2.18)	0.012**	-14.83 (2.44)	0.000***	-15.79 (3.59)	0.000***
(Constant)	34.60 (4.31)	0.000***	31.29 (4.55)	0.000***	39.22 (2.01)	0.000***	30.97 (8.04)	0.000***
N	248		248		248		248	
F (4, 172)	33.99***		23.92***		23.27***		21.48***	
R-squared	0.359		0.283		0.277		0.261	
Adj R-squared	0.34		0.271		0.265		0.249	

Note: The first column of each model reports unstandardized coefficients with standard errors in parentheses. The second column reports P-values and their significance

- * : Significance at 0.10
- ** : Significance at 0.05
- *** : Significance at 0.01

TABLE 6: LOGIT ANALYSIS OF SECTOR AND INSTITUTIONAL COORDINATION ON THE LIKELIHOOD OF LOW LEVELS OF CSR (bottom 20% of firms)

	CSR low		ECON low		SOC low		ENVIRON low	
Logarithm of Turnover	-0.78 (0.16)	0.000***	-0.77 (0.15)	0.000***	-0.40 (0.13)	0.003***	-0.82 (0.16)	0.000***
ROA	0.28 (0.03)	0.342	0.05 (0.03)	0.064*	.050 (0.03)	0.101	-0.04 (0.03)	0.222
High impact industry (dummy)	-1.77 (0.46)	0.000**	-1.58 (0.42)	0.000***	-1.42 (0.41)	0.001***	-2.16 (0.50)	0.000***
Coordination Index	3.28 (0.78)	0.000**	1.35 (0.63)	0.032**	4.00 (0.87)	0.000***	2.55 (0.72)	0.000***
(Constant)	3.89 (1.40)	0.006**	4.86 (1.32)	0.000**	-0.26 (1.31)	0.842	5.27 (1.36)	0.000***
Log likelihood	-86.8		-94.8		-94.5		-84.4	
Number of Observations	248		248		248		249	
LR chi2	64.4***		59.7***		49.9***		66.0***	
Pseudo R2	0.271		0.239		0.206		0.281	

Note: The first column of each model reports unstandardized coefficients with standard errors in parentheses. The second column reports P-values and their significance

* : Significance at 0.10

** : Significance at 0.05

*** : Significance at 0.01

TABLE 7: LOGIT ANALYSIS OF SECTOR AND INSITUATIONAL COORDINATION ON THE LIKELIHOOD OF HIGH LEVELS OF CSR (top 20% of firms)

	CSR high		ECON high		SOC high		ENVIRON high	
Logarithm of Turnover	0.59 (0.11)	0.000***	0.57 (0.13)	0.000**	0.27 (0.12)	0.028**	0.22 (0.12)	0.061*
ROA	0.028 (0.026)	0.294	-0.02 (0.03)	0.562	-0.14 (0.03)	0.596	-0.03 (0.02)	0.269
High impact industry (dummy)	1.47 (0.36)	0.000**	0.66 (0.34)	0.051*	1.01 (0.33)	0.002***	0.83 (0.32)	0.010*
Coordination Index	-0.78 (0.60)	0.193	-0.95 (0.57)	0.096*	-1.47 (0.54)	0.007***	-0.45 (0.54)	0.409
(Constant)	-7.61 (1.44)	0.000***	-6.58 (1.35)	0.000***	-3.51 (1.20)	0.003***	-3.82 (1.17)	0.001***
Log likelihood	-107.1		-112.9		-117.5		-121.1	
Number of Observations	248		248		248		248	
LR chi2	40.7***		26.1***		19.8***		12.6**	
Pseudo R2	0.159		0.104		0.078		0.050	

Note: The first column of each model reports unstandardized coefficients with standard errors in parentheses. The second column reports P-values and their significance

* : Significance at 0.10

** : Significance at 0.05

*** : Significance at 0.01

TABLE 8: LOGIT ANALYSIS OF INVESTOR PROTECTION AND EMPLOYMENT PROTECTION ON THE LIKELIHOOD OF LOW LEVELS OF CSR (bottom 20% of firms)

	ECON low		SOC low	
Logarithm of Turnover	-0.77 (0.15)	0.000***	-0.32 (0.13)	0.018**
ROA	0.06 (0.04)	0.064*	0.03 (0.03)	0.295
High impact industry (dummy)	-1.56 (0.39)	0.000***	-1.27 (0.39)	0.001***
Investor Protection Index	-0.30 (0.20)	0.126	-0.84 (0.17)	0.000***
Employment Protection Index	0.23 (0.26)	0.367	0.16 (0.24)	0.505
(Constant)	5.90 (1.72)	0.000**	4.31 (1.55)	0.005**
Log likelihood	-96.3		-102.4	
Number of Observations	252		252	
LR chi2	46.0***		40.4***	
Pseudo R2	0.241		0.175	

Note: The first column of each model reports unstandardized coefficients with standard errors in parentheses. The second column reports P-values and their significance

* : Significance at 0.10

** : Significance at 0.05

*** : Significance at 0.01