Corporate Social and Environmental Reporting Institutionalized

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External Corporate Social and Environmental Reporting (CSER) finds its raison d'être in corporations' search for both a license to operate and accountability towards society. This suggests a relationship between corporations and society. In this study, that relationship is analyzed, specifically the relationship between levels of CSER and economic institutions. A strong link with institutions is an outcome of institutionalization. The economic institutions applied are economic freedom and legal origin as a proxy for national corporate governance systems. The results of this descriptive study show associations between CSER levels and economic freedom. CSER is also related to national corporate governance systems through legal origin. CSER appears to be institutionalized, or in any case, corporations seem to be aware of the economic institutionalization of CSER.

Keywords: social and environmental reporting, economic institutions, stakeholders, legitimacy

Introduction

The major idea behind this study is the existence of the systems orientation of businesses. In other words, businesses are parts of the system society, which is expressed through corporate reporting. Corporate Social and Environmental Reporting (CSER) relates to the systems orientation. With CSER, corporations show their social and environmental performance to society or specific groups within society. This study contains an empirical search for societal determinants of CSER. In this study, societal determinants are societal institutions, societal moulds. Three types of institutions exist: economic, social, and political. In this paper, only economic institutions are studied.

Institutions exist both formally and informally. Laws are examples of formal institutions. Institutions are humanly determined constraints on human interaction, as described by North (1990). In order to be able to analyze voluntary behavior, informal institutions are chosen. Associations between CSER and the economic institutional environment are analyzed with the use of a system-theoretical framework. The framework consists of two theories: stakeholder theory and legitimacy theory. Hypotheses with regard to the associations studied are drawn from these theories. Both theories are applied at a national level. National institutions are suggested to be related to corporate-level reporting. The hypotheses are assessed with the use of an economic-institutional regression model.

Economic institutions are seen as the most relevant in the field of financial accounting by Ball, Kothari, and Robin (2000) and in the field of assurance of CSER by Simnett, Vanstraelen, and Chua (2009). The two studies limit the economic institutions by legal origin only.

The research problem of this study is whether an association exists between CSER levels and economic institutions. This emerges from the institutional moulds, which are determinants of actions by system participants—the corporations.

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After the introduction, this article continues with a description of prior literature. Then, a discussion on methodology is given. The theoretical framework and hypotheses development are given thereafter, followed by a section on the results of the statistical and hypotheses testing. Then, the article is finalized with conclusions.

Prior Literature

This study assumes the existence of a CSER sub-paradigm within financial accounting research. The theoretical framework that has links with financial accounting theory, as suggested by Deegan and Unerman (2006), is applied. CSER research also has ties with strategic management research, as is shown by Ullmann (1985). A somewhat large body of literature is available, and part of this body is discussed in this section.

The review of literature is done in three parts. First, studies are discussed that have a focus on the use of theory. Next, this paper discusses studies that search for institutional determinants of CSER. At the end of this section, other studies are discussed that search for determinants in other contexts.

Ullmann (1985) published an important article on CSER in 1985, in which he stated that no clear theory is available to describe links between levels of CSER and strategic corporate goals. He suggested that stakeholder theory may be applicable to explain "data in search of a theory" (Ullmann, 1985). He also tried to describe a relationship between corporate financial performance and CSER. Many other authors have tried to do the same, as is described by Orlitzky and Benjamin (2001).

Gray, Owen, and Maunders (1988) provided a basis for the application of legitimacy theory in CSER research. Adams, Hill, and Roberts (1998) applied legitimacy theory to describe CSER. They searched for corporate and national characteristics that have an effect on CSER. They explained the differences between CSER levels by the differences in how corporations deal with legitimacy issues at a national level. They studied institutions, but did not clearly mention this. Among the national differences, they mentioned government ideology of economic freedom as an economic institution, culture as a social institution, and environmental and labor laws as political institutions. Size of corporations is also said to determine CSER levels because of a corporate search for legitimacy. Adams et al. (1998) suggested an association between economic institutions and CSER that is caused by government ideology on free markets. They hypothesized that ideology causes corporations to behave in line with norms of external social and environmental stakeholders, as the opposite behavior may lead to legal restrictions on economic freedom; informal institutions may lead to formal institutions. They explained this behavior as a result of a search for legitimacy, which is similar to an implicit license to operate. Newson and Deegan (2002) stated that culture has an effect on CSER, because culture influences the way corporations deal with legitimacy.

Van der Laan Smith, Adikhari, and Tondkar (2005) assessed a sample of US and Scandinavian corporations with a combined framework of culture as a social institution and legal origin as a proxy for national corporate governance systems, an economic institution. Code law is supposed to be stakeholder-oriented and common law is supposed to be shareholder-orientated. They found support for their hypothesis that CSER is associated with both legal systems and culture.

Simnett et al. (2009) applied legal origin as a proxy for the difference between national stakeholder and shareholder orientations at an institutional level. They found support for their statement that a stakeholder orientation is associated with the level of CSER assurance.

Orij (2010) built further on Van der Laan Smith et al. (2005) and related CSER to stakeholder theory and culture.

In CSER research, little attention is given to economic institutions as a determinant of disclosure compared to mainstream financial accounting research. In financial accounting research, Ball et al. (2000) related economic institutions to properties of accounting earnings. Other financial accounting studies by Hope (2003a; 2003b) and Hope, Kang, Thomas, and Yoo (2008) studied determinants that relate to enforcement of accounting regulation, auditor choice, legal systems, and culture. With regard to the discussion on legal origin, they referred to the research paradigm of law and economics and the specific study by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1999). The latter also provides detailed data on code law sub-groups. They stated that clear differences exist among French, German, and Nordic code laws, which may affect national corporate governance systems.

Methodology

CSER research can be classified as interpretative or sometimes critical research. A positive, theory-verification research methodology is chosen in order to be able to draw generic conclusions. In this study, descriptives of CSER are looked for through the search for associations between CSER and economic institutions.

The regular focus of mainstream research on decision usefulness for investment purposes of all external corporate reporting is not applied. There are two reasons for not using that approach. The first is that this study focuses on outside determinants that have an internal effect. An outside-in approach is applied, as is described by Burritt and Schaltegger (2010). The second reason is theoretical. The system-oriented approach that is applied in most CSER research suggests that everything in society is interrelated. The corporation-shareholder relationship is not the only relevant relationship for corporate reporting, especially not for CSER. The raison d'être for CSER is societal, not solely economic, which is one of the fundamental premises of this study.

Hypotheses are developed out of a theoretical framework and prior literature. The hypotheses are tested with the use of statistical material from a large sample of CSER data. The data provided by Sustainalytics consist of 600 corporations from 22 countries. The selection of corporation originates from the MSCI World Index (MSCI Barra, 2010). The statistical analysis consists of multivariate regression models, supported by bivariate correlations. Independent variables are country data on institutions. The dependent variable is the CSER score provided by Sustainalytics. Further details on the CSER score are provided below.

The main methodological limitation of this study is its static character; only one year, 2012, is studied. Institutions are supposed to be "fluid", a general characteristic of institutions nowadays, as Bauman (2007) stated.

Theoretical Framework and Hypotheses Development

The theoretical framework consists of stakeholder theory, legitimacy theory, and institutions from institutional theory. Institutions will be discussed firstly. Thereafter, legitimacy theory and stakeholder theory are discussed. After the discussion on the theoretical framework, hypotheses are developed.

Institutions have been defined by North (1990) in his institutional theory. He recognized three types of institutions: economic, social, and political. Institutions are social phenomena. They are patterns in society—constraints created by people, which can be ideological or ethical. Institutions are not set forever. They may change, particularly through globalization. Bauman (2007) described this and Stiglitz (2007) related it to multinational corporations. In this study, it is assumed that corporations may be "asked" to adapt to

societal institutions. Corporations are assumed to show their adaptation to the institutions by their CSER. The motives for adaptation may be found in other theories. The other theories are system-oriented theories that explain corporate behavior, stakeholder theory, and legitimacy theory. These system-oriented theories are seen as part of a financial accounting research paradigm by Deegan and Unerman (2006). These theories describe the relations between the society as a system and the corporation.

Stakeholder theory has been developed by Freeman (1984). According to this theory, the corporation directs its activities towards the interests of several stakeholders, in such way as it is described by Mitchell, Agle, and Wood (1997).

Related to stakeholder theory are the concepts of communitarianism and contractarianism. These concepts define stakeholder orientation at a national level. Communitarianism stands for a society which is oriented towards responsibility and sharing equally (Bradley, Schipani, Sundaram, & Walsh, 1999). Contractarianism stands for a society in which individual freedom and interests stand first. In recent research, communitarianism has also been linked to a stakeholder orientation or a social orientation of the society (Simnett et al., 2009). With that assumed theoretical relationship, the connection between institutions and social orientation at a national level can be established.

Legitimacy theory originates from the social contract of Rousseau (2003, original publication in 1762) and other enlightenment philosophers. Legitimacy is an informal contract with society, and legitimacy of corporations is sometimes called license-to-operate. It may also be seen as the social acceptance of the corporation. A corporation may deal with legitimacy at three different levels: creating legitimacy, preserving legitimacy, or regaining legitimacy (Suchman, 1995). Legitimacy theory suggests that social pressure relating to legitimacy differs for every particular corporation. Corporations in certain risky industries experience larger pressures than others, and large corporations experience more pressure than small ones. Legitimacy theory is generally applied at an organizational level, as Suchman (1995) described. Newson and Deegan (2002) applied the theory at a national level. They suggested that differences exist internationally concerning the search for organizational legitimacy. They related their outcomes to a combination of cultural and economic institutions.

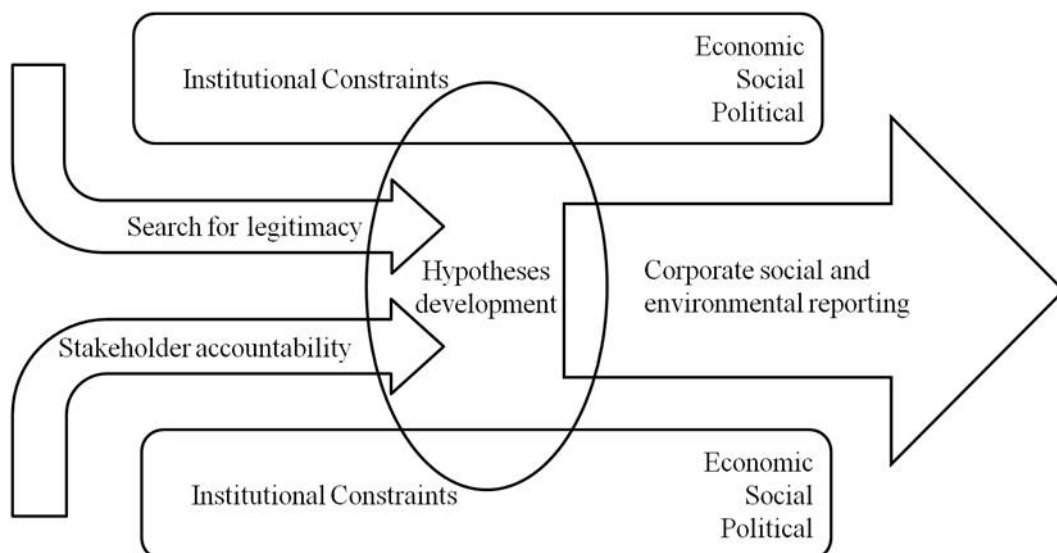The theoretical framework and the hypotheses development are visualized in Figure 1.

Figure 1. Visualization of relationships between theoretical framework and hypotheses development.

The size of this study only allows searching for relationships between the level of CSER and one type of institution. Only economic institutions are studied. The economic institutions studied are national corporate governance systems and government free market ideology, that is to say, economic freedom, which may be seen as the level to which governments favor capitalism. The national corporate governance systems relate to legal origin of the country involved. The relationship between corporate governance and legal systems can only be established through stakeholder theory and communitarianism. The latter suggests that a stakeholder orientation within nations may be caused by a social orientation that relates to the legal origin. A stakeholder orientation leads to a corporate focus on stakeholder accountability, which further leads to a higher level of CSER. Code law leads to a stakeholder orientation, whereas common law systems lead to a shareholder orientation. Common law is seen as the opposite with regard to social orientation. This reasoning leads to the following hypothesis:

H1: Legal origin and its related national corporate governance system are associated with the level of CSER through a negative association with common law and a positive association with code law.

Prior studies, such as Simnett et al. (2009), confirmed the theoretical associations, as suggested by stakeholder theory and communitarianism. Legal origin in H1 can only be related to stakeholder issues instead of legitimacy issues. There is no proof of the relevance of legitimacy issues with regard to legal origin.

H1 suggests legal origin to be an explanatory variable, which differs from Orij (2010). In that study, legal origin was a control variable, as culture was the main issue to be studied.

A further hypothesis is based upon free market ideology. The existence of a relationship between levels of CSER and free market ideology is suggested by Adams et al. (1998). They suggested a positive association. Corporations want to keep freedom intact, and for this reason, they try to please the lawmakers with the use of CSER. Corporations are supposed to deal with lawmakers in a similar manner as is explained by the political cost hypothesis from positive accounting theory (PAT). Milne (2002) linked CSER to PAT.

However, another reasoning may be possible. Orij (2012) suggested that the relationship between levels of CSER and free market ideology can be explained by a national stakeholder orientation, similar to legal origin. The reasoning behind this suggestion is as follows: The higher the level of economic freedom, the fewer the corporations willing to deal with stakeholders other than shareholders. Free markets do not coincide with a stakeholder orientation. Therefore, levels of CSER are likely to be negatively associated with economic freedom.

The discussion on this hypothesis leads to two sub-hypotheses:

H2a: Economic freedom is positively associated with levels of CSER, through national levels of legitimacy-seeking corporate behavior.

H2b: Economic freedom is negatively associated with levels of CSER, through stakeholder-oriented corporate behavior.

The two sub-hypotheses suggest opposite directions of the relationships. The possible outcomes of H2a and H2b, which conflict, are shown in Table 1.

In brief, Table 1 describes which sub-hypothesis, H2a or H2b, can be confirmed, if a particular association is found. Concluded from the analysis in Table 1 may be that depending on the direction of the association, H2a or H2b can be confirmed, not both at the same time.

Table 1

Possible Outcomes of Opposing H2a and H2b

Possible strength of theoretical relationships	Possible empirical relationship found	Possible confirmation of hypotheses
Positive legitimacy effect is suggested to be stronger than negative stakeholder effect on CSER. Overall effect is suggested to be positive.	Positive	The empirical test shows that the positive effects are stronger than the negative effects. The positive legitimacy effect can be confirmed. The negative stakeholder effect cannot be confirmed, as it seems to disappear within the larger legitimacy effect. H2a can be confirmed. H2b cannot be confirmed.
Positive legitimacy effect is suggested to be weaker than negative stakeholder effect on CSER. Overall effect is suggested to be negative.	Positive	The negative stakeholder effect is found to overrule the positive legitimacy effect, if it exists, as the empirical test shows that the negative effects are stronger than the positive effects. Both H2a and H2b cannot be confirmed.
Positive legitimacy effect is stronger than negative stakeholder effect. Overall effect is suggested to be positive.	Negative	The positive legitimacy effect is found to overrule the negative stakeholder effect, if it exists, as the empirical test shows that the negative effects are stronger than the positive effects. Both H2a and H2b cannot be confirmed.
Positive legitimacy effect is weaker than negative stakeholder effect. Overall effect is suggested to be negative.	Negative	The negative stakeholder effect is suggested to overrule the positive legitimacy effect. The empirical test shows that the negative effects are stronger than the positive effects. The positive legitimacy effect can be confirmed, but the negative stakeholder effect cannot be confirmed; H2a cannot be confirmed, while H2b can be confirmed.

Sample, Data, and Operationalization

In this paper, a sample from 2012 is studied. The sample contains 3,553 companies from 56 countries. The selection of the sample and the contents of the database are based upon all available information provided by Sustainalytics, an international corporate social responsibility (CSR) research company. The dataset is compiled by a content analysis of the companies' publicly available reports and interviews done by Sustainalytics. The scoring system is based upon a combined assessment of the quantity and quality of CSR activities by companies. A description of the assessment methods by Sustainalytics is available to the author. Sustainalytics aims to collect CSR data from all companies included in the "World Index". The collection of the Sustainalytics data has been a combined effort by the SiRi group of research institutes, originally also including Kinder Lydenberg Domini (KLD). KLD data are used in the majority of CSR and CSER studies (Orlitzky & Benjamin, 2001) and are useful data, as Sharfman (1996) demonstrated. The availability of CSR data is the bottleneck in CSR research, which makes these data the starting point for the sample selection (Sharfman, 1996). A similar approach to application of the data is done in Orij (2010), but with older data (2006) and other combinations of variables.

Industry or sector data are also provided by Sustainalytics. The variable on sector data is a dummy variable that scores the membership of an industry group or sector. GSCI sector data consist of 10 sectors, which lead to nine dummy variables (sector (STR)).

Institutional data come from several sources and these are values per nation. The first economic institution is economic freedom (ECF), as suggested by Adams et al. (1998). They did not assess this variable, but hypothesized a relationship with CSER. A relevant source is Simnett et al. (2009). They applied data by Kaufmann, Kraay, and Mastruzzi (2009). Kaufmann et al. (2009) applied data on economic freedom by the Heritage Foundation (2012), a US think tank on conservatism and economic freedom.

Data on corporate governance system, particularly its legal origin basis, are taken from La Porta et al. (1999). Corporate governance as an economic institution is represented by a dummy variable for legal origin, as Van der Laan Smith et al. (2005) and Simnett et al. (2009) suggested. Hope (2003a) applied detailed sub-groups of legal systems: French (FRE), German (GER), and Nordic (NOR) code laws. La Porta et al. (1999) provided the fifth[1] type of legal origin: socialist. Table 2 shows these data per country.

Table 2

Country Data

Country	Number of companies	Legal origin	Economic freedom
Australia	186	Common	95.5
Austria	32	German	73.6
Bahamas	1	Common	69.2
Belgium	19	French	91.6
Bermuda	12	Common	45.4
Brazil	78	French	53.0
Canada	249	Common	91.7
Cayman Islands	1	Common	58.9
Channel Islands	4	Common	25.2
Chile	15	French	70.5
China	117	Socialist	48.0
Colombia	8	French	90.2
Cyprus	2	Common	80.7
Czech Republic	3	Socialist	65.8
Denmark	21	Nordic	98.4
Egypt	9	French	63.3
Finland	22	Nordic	94.8
France	125	French	84.0
Germany	162	German	92.1
Greece	10	French	77.1
Hong Kong	101	Common	98.9
Hungary	4	Socialist	79.1
India	91	Common	37.3
Indonesia	27	French	20.2
Ireland	21	Common	83.4
Israel	19	Common	66.1
Italy	35	French	76.9
Japan	347	German	81.3
Luxembourg	8	French	74.8
Macau	2	French	60.0
Malaysia	39	Common	79.9
Mauritius	1	Common	78.2
Mexico	23	French	81.4
Morocco	3	French	76.4
The Netherlands	74	French	57.2
New Zealand	7	Common	99.9
Norway	17	Nordic	92.6

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[1] The five types are FRE, GER, NOR, SOC, and common law.

(Table 2 continued)

Country	Number of companies	Legal origin	Economic freedom
Papua New Guinea	1	Common	58.3
Peru	2	French	72.3
The Philippines	18	French	72.3
Poland	22	Socialist	64.0
Portugal	10	French	82.8
Russia	29	Socialist	69.2
Singapore	37	Common	97.1
South Africa	46	Common	74.7
South Korea	75	German	93.6
Spain	51	French	80.3
Sweden	36	Nordic	93.2
Switzerland	55	German	75.8
Taiwan	106	German	94.3
Thailand	23	Common	73.2
Turkey	23	French	68.2
Ukraine	1	Socialist	47.6
United Arab Emirates	2	Common	74.0
UK	138	Common	94.1
US	983	Common	90.5
Total	3,553		

Note. Sources: Legal origin: La Porta et al. (1999); Economic freedom: Heritage Foundation (2012).

Table 3 shows the descriptive statistics of the variables.

Table 3

Descriptive Statistics

Variable	*N*	Minimum	Maximum	Mean	Standard deviation
CSER	3,553	0.00	275.00	30.1435	53.86289
ECF	3,553	252.00	999.00	834.6696	147.16631

Notes. CSER is corporate social and environmental reporting. ECF is economic freedom. Sources: CSER: Sustainalytics; ECF: Heritage Foundation (2012).

Results

In this section, results of various statistical tests are shown: correlations, *T*-tests, and regression models. The results from the statistical tests are used further in the hypotheses testing.

In Table 4, bivariate Pearson correlations among variables CSER, ECF, and legal origin are shown.

In Table 4, it is shown that CSER correlates significantly with all variables, except for COM. None of the bivariate correlations is alarmingly high, as very high correlations may disturb other associations. The significance of the detailed code law dummies with COM is obvious, as these score 0, while COM scores 1.

In Table 5, results of bivariate *T*-tests are shown, which provide evidence on the differences in mean CSER levels between the legal origins.

The results from Table 5 show that the CSER level differs between many of the legal origins. As suggested before, it is likely that corporations from code law countries score higher than those from common law countries. But the outcomes of the *T*-tests do not support the suggested difference. The only type of legal origin that shows significant differences in CSER levels is socialist legal origin. These are lower than all other levels.

Table 4

Bivariate Pearson Correlations (Two-Sided)

Variable	COM	FRE	GER	NOR	SOC	ECF
COM	1	-0.471[**]	-0.588[**]	-0.188[**]	-0.251[**]	0.337[**]
FRE		1	-0.224[**]	-0.072[**]	-0.096[**]	-0.350[**]
GER			1	-0.090[**]	-0.119[**]	0.084[**]
NOR				1	-0.038[*]	0.118[**]
SOC					1	-0.446[**]
ECF						1

Notes. CSER is corporate social and environmental reporting. ECF is economic freedom. COM is common law. FRE is French code law. GER is German code law. NOR is Nordic code law. SOC is socialist legal origin. [*]: $p < 0.05$. [**]: $p < 0.01$. Sources: CSER: Sustainalytics; COM, FRE, GER, NOR, and SOC: La Porta et al. (1999); ECF: Heritage Foundation (2012).

Table 5

T-tests' CSER and Legal Origin

Test	d.f.	CSER mean: 1st variable	CSER mean: 2nd variable	Diff.	*T*-value	Significance (2-tailed)
COM-COD	3,048	30.92	30.11	0.81	0.427	0.669
COM-SOC	2,133	30.92	21.59	9.33[*]	2.198	0.028
COD-SOC#	1,588	30.11	21.59	8.52[*]	1.984	0.047
COM-all other	3,427	30.92	29.19	1.73	0.956	0.339
FRE-all other	3,551	27.53	30.61	-3.09	-1.229	0.219
GER-all other	3,551	32.46	29.50	2.96	1.355	0.175
NOR-all other	104	25.80	30.27	-4.47	-0.826	0.411
SOC-all other	3,551	21.59	30.58	-8.99[*]	-2.782	0.033
COM-FRE	2,503	30.92	27.53	3.39	1.314	0.189
COM-GER	1,340	30.92	32.46	-1.54	0.635	0.526
COM-NOR	109	30.92	25.80	5.12	0.936	0.351
COM-SOC#	2,133	30.92	21.59	9.33[*]	2.198	0.028
FRE-GER	1,317	27.53	32.46	-4.93	-1.615	0.107
FRE-NOR	130	27.53	25.80	1.73	0.302	0.763
FRE-SOC	341	27.53	21.59	5.94	1.589	0.113
GER-NOR	130	32.46	25.80	6.66	1.163	0.247
GER-SOC	947	32.46	21.59	10.87[*]	2.324	0.020
NOR-SOC	164	25.80	21.59	4.21	0.683	0.496

Notes. This table uses two-sided *T*-tests. CSER is corporate social and environmental reporting. COM is common law. COD is code law. FRE is French code law. GER is German code law. NOR is Nordic code law. SOC is socialist legal origin. Sample size is 3,553. d.f. is degree of freedom. Sources: CSER: Sustainalytics; COM, FRE, GER, NOR, and SOC: La Porta et al. (1999). #: shown twice to be consistent.

In the next part of this section, the regression models are suggested and assessed. The basic model, Model 1, contains the dependent variable CSER and the independent variables COM and ECF score by the Heritage Foundation. The model also contains the control variables for the sector. The model does not contain any company-specific economic variables, as no theoretical foundation for that inclusion is available. The following model is suggested to assess all hypotheses:

$$CSER = \beta_0 + \beta_1 ECF + \beta_2 COM + STR + e \qquad \text{(Model 1)}$$

The nine STR dummies are not shown separately in the table.

The second model contains the detailed legal origin sub-groups, instead of the straightforward distinction between code law and common law countries:

$$CSER = \beta_0 + \beta_1 ECF + \beta_2 FRE + \beta_3 GER + \beta_4 NOR + \beta_5 SOC + \beta_6 STR + e \quad \text{(Model 2)}$$

The third model will be tested without the SOC group. The classic distinction between common and code law legal origins is hypothesized. The model is similar to Model 1.

The exclusion of one part of the dataset is based upon this classic distinction. Legal origin has never been hypothesized as having a relationship with corporate governance systems:

$$CSER = \beta_0 + \beta_1 ECF + \beta_2 COM + \beta_6 STR + e \quad \text{(Without SOC Legal Origin)} \quad \text{(Model 3)}$$

The results of the regression models are shown in Table 6.

Table 6

Regression Models That Describe CSER Levels

Variable	Model 1 CSER described by economic freedom, legal origin, and sector	Model 2 CSER described by economic freedom, legal origin in detail, and sector	Model 3 CSER described by economic freedom, legal origin, and sector, without socialist legal origin
Constant	18.180[**]	25.34[***]	1.098[***]
COM	0.882		-0.150[***]
ECF	0.007	-3.50	0.00013[**]
FRE		1.47	
GER		-3.83	
NOR		-8.10	
SOC		-0.00	
STR	Dummy, consisting of nine items, some[***]	Dummy, consisting of nine items, some[***]	Dummy, consisting of nine items, some[***]
F	11.344[***]	13.987[***]	67.432[***]
Adj. *R*-squared	0.039	0.039	0.217

Notes. First line is coefficient. Second line is *T*-value. CSER is corporate social and environmental reporting. ECF is economic freedom. COM is common law. FRE is French code law. GER is German code law. NOR is Nordic code law. STR is sector. SOC is socialist legal origin. *F* is *F*-statistic of the analysis of variance (ANOVA). [***]: $p < 0.001$, [**]: $p < 0.01$, [*]: $p < 0.5$. Sources: CSER: Sustainalytics; COM, FRE, GER, NOR, and SOC: La Porta et al. (1999); ECF: Heritage Foundation (2012); STR: Sustainalytics.

Before a full analysis of the regression models can be provided, an analysis of the expected signs is given (see Table 7). The variable legal origin, as the distinction between corporations from common law and code law countries, is supposed to score negatively. The dummy variable scores 1 for common law and 0 for code law. The expected negative association is explained by the shareholder orientation within common law countries.

The direction of the ECF variable may vary with the explanatory theory (see Table 1).

Table 7

Signs of Variables

Variable	Expected sign	Empirically found sign (Model 3)
ECF	- or + #	+
COM	-	-

Notes. ECF is economic freedom. COM is common law. #: direction dependent on the explanatory power of two theories (see Table 1).

Now we follow the analysis of the results given in Tables 6 and 7. All three models in Table 6 are significant on the whole, as can be seen by the significance of the *F*-statistic. For the first two, the significance is most probably caused by the industry variables. Models 1 and 2 show no significance for any of the main variables. The total dataset seems to be out of balance. The companies that relate to the non-hypothesized socialist legal origin are taken out for Model 3, which works out well. The main variables COM, legal origin, and ECF contribute significantly to Model 3.

For Model 3, the contribution of COM is consistent with the expectations, according to Table 7. The contribution of ECF is positive, also consistent with expectations, as is suggested by stakeholder theory according to Table 7, as both signs may occur, depending on the theoretical backing.

With older data (2006), Orij (2012) found other conclusions, though one important addition is made here: the separation between socialist legal origin and the others.

On the basis of the prior results, H1 can be confirmed: The legal origin and the related corporate governance system are determinants of corporate levels of CSER; legal origin up to the level of the distinction between code law and common law and with the specific additional conclusion about socialist legal origin. Not all legal systems and related corporate governance systems are determinants of CSER, in particular, socialist legal origin and the related corporate governance systems cannot be confirmed as a determinant of CSER. The bivariate analyses show that particularly the socialist legal origin matters particularly in a negative way. The multivariate analysis also confirms the significance of the common law-code law distinction on legal origin, as was hypothesized.

The analysis of H2a and H2b is based upon all possible outcomes of the confrontation of hypotheses and findings in Table 1. The positive impact by legitimacy-related motives may "overrule" possible smaller, negative effects suggested by stakeholder theory. Only the negative impact can be confirmed, which leads to a confirmation of H2b. H2a cannot be confirmed. Overall, economic freedom is confirmed as a determinant of CSER, particularly through legitimacy-related motives. The sector effects also contribute to that conclusion.

Conclusions and Discussion

In this study, a relationship has been established between CSER and the economic-institutional environment of corporations. These economic institutions are economic freedom and the national corporate governance systems. The latter are represented by the legal origins of the nations. This was shown to be relevant, as a corporate governance-systematic determinant of CSER, but not generically. Common law and code law systems are relevant determinants, but socialist legal origin is not.

Further, the economic institution of government ideology that promotes economic freedom has a positive impact on CSER levels. This ideology is the level to which government favors economic freedom. More capitalism relates to more legitimacy-oriented social and environmental reporting. This effect is disturbed by companies from countries with a socialist legal origin, which shows low economic freedom and low levels of CSER. The latter can only clearly be shown in the correlation table, as the regressions do not show significant associations.

In general, a relationship among economic institutions can be confirmed, though less clear than initially expected. CSER is somewhat institutionalized with regard to economic institutions.

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