Radboud University

The Association Between Corporate Social Responsibility and Earnings Management: Studying the Moderating Effects of Country-Specific Formal and Informal Institutions

Author: Thomas van der Velden (S4859723)

Supervisor: Dr. A. Th. Fytraki

Radboud University, Nijmegen School of Management

Master Economics, Accounting and Control

03-07-2020

Abstract

This research studies the moderating effects of formal and informal institutional factors on the relationship between Corporate Social Responsibility (CSR) and earnings management (EM). Prior knowledge has provided mixed results when studying the effect of CSR on EM. In order to provide more in-depth insights in the relationship between CSR-EM, the moderating effects of investor protection (formal) and Hofstede's culture dimensions (informal) are tested. By means of 4347 observations across 17 different countries over the period of 2010-2018, statistical analyses were performed. The results indicate that more power distance within a country leads to a more negative effect of CSR on EM and more individualism and less collectivism within a country leads to more positive effect of CSR on EM. The robustness tests indicate that both the main effect of CSR as well as the moderating effects of uncertainty avoidance differ for firms located in civil law countries compared to firms located in common law countries. This research provides insights for managers, by proving managers have to take the cultural standards of a country into account when they face a decision-making situation which concerns either CSR, EM or both of them.

Keywords: CSR, Accrual-based earnings management, Real earnings management, investor protection, power distance, masculinity, individualism, uncertainty avoidance

Table of Contents

1. Introduction

Over the past decades Corporate Social Responsibility (CSR) gained prominence and the reporting of the CSR activities of firms became a common part of firms' reporting practices. By reporting their CSR activities, firms tend to meet the demand for increased transparency with regards to all parts of the business by their stakeholders (Kim et al., 2012). According to the CSR dictionary of Idowu et al. (2015), a possible definition for CSR is: *"The way firms balance environmental, social and economic aspects trying to be transparent and accountable and establishing better practices to create wealth and improve society"* (Idowu et al., 2015, p. 155). Previous catastrophic corporate scandals have led to the demand for increased transparency and societal pressure to meet both the environmental and social, as well as the ethical responsibilities expectations (Money and Schepers, 2007). The bankruptcy of Enron[1], Volkswagen's emission fraud[2] and BP's oil spill[3] all revealed the devastating effects of firms not behaving in a social responsible way.

Besides environmental and social aspects, financial transparency and accountability are indispensable segments of CSR (Chih et al., 2008). The pressure to improve CSR and thus improve financial transparency, has the ability to minimize the financial information discrepancy between outsiders and insiders of a firm (Chih et al., 2008). Leuz et al. (2003) argue that there is a conflict of interest between the in- and outsiders of firm, and that this conflict incentivizes insiders to engage in earnings management (EM) to provide a misrepresentation of the firm's financial performance. By engaging in aggressive EM, firms can exceed analysts' forecasts. Via the increase of accruals or the delay of expenses, management (insiders) can engage in EM and increase earnings on paper (Scholtens and Kang, 2013). The effect of engaging in EM on the informational discrepancy between insiders and outsiders is twofold. First, by overstating the earnings or understating the adverse earnings (decrease in earnings / losses), insiders can protect themselves from outsiders questioning the insiders' ability properly managing the firm (Chih et al., 2008). Second, EM engagement harms the outsiders ability to monitor the financial statements of the firm, as EM leads to inaccurate financial reports containing inaccurate reports about the financial performance of a firm (Leuz et al., 2003).

Leuz et al. (2003), argue that the insiders' control benefits are decreased when there is a well-enforced institutional environment, which protects the outsiders rights. A strong institutional environment has the ability to mitigate agency conflicts between insiders and outsiders, without carrying incremental costs for firms (An et al., 2016). Bhattacharya et al. (2003) indicate that reported

---

[1] In 2001 Enron, one of the world's largest energy providers, filed for bankruptcy after committing accounting fraud. Enron hid large amounts of debt and overvalued their earnings. The scandal led to the loss of jobs and life savings for over thousands of people employees (Clarke, 2005).

[2] In 2015 researchers found that Volskwagen implemented fraudulent software in their diesel engines. This software caused diesel engines to pass emission tests, when in fact the engines emitted more than the rules allowed them to. This scandal led to a 40% decrease in stock value (Jung and Sharon, 2019).

[3] The oil spill of BP in 2010 caused 4.9 million barrels of oil to flow into the gulf, causing severe environmental damage and 11 deaths (Shultz et al. 2015).

earnings are less opaque in countries with well-enforced legal standards. This can be explained by the fact that a strong legal environment increases the transparency of firms (Bushman et al., 2004). Therefore prior research indicates that a negative relation between institutional factors and firms engaging in aggressive EM. Besides institutional factors such as investor protection, it is well documented that cultural factors have an effect on EM. According to Gray (1988) the culture in a country influences the accounting practices, meaning that EM varies from country to country due to cultural differences. National cultural characteristics such as individualism can explain the differences between managers engaging in aggressive EM in different countries (Han et al., 2010).

This research studies the relationship between CSR and EM and the effects of institutional and cultural factors on this relationship. Existing knowledge on CSR is abundant, this existing knowledge however focusses mainly on the relationship between CSR performance and the financial performance of a firm. There remains a debate within the existing knowledge on this relationship on whether CSR positively (Hu et al., 2018; Malik, 2015; Porter and Kramer, 2006; McWilliams et al. 2006) or negatively (Aupperle, Carrol and Hatfield, 1985; Marsat and Williams, 2014) affects a firm's financial performance. Besides the abundance of research on CSR, the relationship between CSR and EM is well scrutinized as well (Jordaan et al., 2018; Buertey et al., 2020; Bozzolan et al., 2015; Yip et al., 2011; Kumala and Siregar, 2020; Chih et al., 2008; Martinez-Ferrero et al., 2016). Although these relationships are well scrutinized, little knowledge is obtained with regards to the effect of formal and informal institutional factors on the relationship between CSR and EM. Moratis and van Egmond (2018) express the desire for further scrutiny of the relationship between CSR and EM. Besides the need for studying the CSR – EM relationship by the use of other measures for both CSR and EM, Moratis and van Egmond (2018) stress the need to include the differences in national environments between different countries. García-Sánchez and García-Meca (2017) state that it is of relevance for policymakers to study the effects of institutional factors on the relationship between CSR and EM, and that further research should take cultural differences into account when studying this relationship.

The little existing knowledge on the effect of institutional factors on the relationship between CSR and EM has limitations. Existing knowledge is either industry specific (García-Sánchez & García-Meca, 2017), country specific (Kim et al., 2019), industry as well as country specific (Grougiou et al., 2014), or uses outdated datasets (Kyaw et al., 2017), and has provided mixed results (Kim et al., 2012; Prior et al., 2008).

This research fills this gap by studying and comparing the effects of formal institutional and cultural factors on the CSR – EM relationship for firms located in 16 different countries. By studying this, this research adds to the existing knowledge on the relationship between CSR and EM by providing new insights in the effects of formal institutional and cultural factors in countries spread across the world. In doing so this research answers the following research question: *"What are the*

effects of institutional factors and cultural factors on the relationship between Corporate Social Responsibility Performance and earnings management?"

This study will provide insights for authorities and investors that helps them understand CSR practices and how these are related to EM in countries that differ in terms of the formal side and cultural part of the prevailing institutional environment. Besides that this research provides policy insights. As findings could suggest that CSR decreases firms to engage in EM, policy makers could improve regulations with regards to CSR practices in an attempt to reduce aggressive EM engagement. On top of that findings could imply that by increasing investor protection, policymakers could reduce firms tendency to use CSR to cover up their earnings management.

This research possesses the following structure, in chapter two of this research the existing relevant literature is reviewed to provide a proper indication of the existing knowledge with regards to this research field and what research gaps have not yet been addressed. Within chapter two of this research hypotheses will be developed based on the existing knowledge and an analysis of the relevant available theory. After chapter two, the research method will be extensively explained in chapter three. Chapter three will provide an overview of what variables are used in this research, how these variables are measured and why these variables are used. Following the research method section, the results of the statistical tests are thoroughly analyzed in chapter four, and this research will end with a discussion and conclusion section in chapter five which will also provide limitations of the research as well as recommendations for future research.

2. Literature Review & hypotheses development

The literature review provides a systematic analysis of the relevant literature with regards to the research field of CSR, Earnings Management and institutional factors. This review examines empirical papers that studied the same relationship as this research will study and papers that studied parts of the relationship this research is studying. As a starting point for this literature review articles from the top 20 accounting journals according to Lowe and Locke (2006), are used. A list with the rankings is provided in Appendix A.

CSR and Earnings Management

When engaging in Earnings Management (EM) transactions are structured which alters financial reports, this has a misleading effect on the stakeholders' perceptions of the firm's financial performance (Healy & Wahlen, 1999). Within EM a distinction can be made into Accrual-Based Earnings Management (AEM) and Real Earnings Management (REM). Cash flows of firms are not affected when management engages in AEM because estimates of the accounting system are adjusted, there is no real money involved (Roychowdhury, 2006). If management engages in AEM the firm opts for a legally acceptable accounting policy from the total of available accounting policies, which helps the firm reach its goals related to their earnings (Braam, Nandy, Weitzel & Lodt, 2015). When firms engage in REM, their cash flows are affected, as engaging in REM holds that a firm is not operating in the way it normally uses to operate (Roychowdhury, 2006). An example of engaging in REM is postponing or reducing certain expenses, that are not necessarily vital, to a future period in order to meet the present goals (Hong & Andersen, 2011). For instance advertising costs.

By providing manipulated financial reports, financial transparency is lost as the financial numbers display a false projection of the financial state of the firm. Financial transparency is an indicator for determining the degree of social responsibility of a firm (Bozzolan et al., 2015). Behaving in a social responsible manner and contributing to social well-being is based on four separate segments according to the pyramid of CSR of Carroll (1991)[4]. The foundation of Carrol's Pyramid consists of economic responsibilities and holds that a firm has to generate provides to realize corporate continuity. On top of the economic responsibility segment is the legal segment and imply that by complying to the legal regulations of its environment, firms generate value to society. The third segment consists of the ethical responsibilities, which demands ethical behavior of the firm by avoiding harm and doing what is the right thing to do. The top segment extends the third segment by adding philanthropic responsibilities, which holds that firms must be a good corporate citizen and

---

[4] A visual represantion of Carroll's pyramid of CSR is provided in Appendix A

improve the quality of life by contributing resources to the community. Firms thus behave in a social responsible way by voluntarily contributing to the enhancement of societal well-being. A firm's tendency to behave in a responsible way and its CSR orientation affects the involvement of top management during the composition of the financial reports, as well as their inducements to provide misleading representations of financial performance of the firm (Kim et al., 2012)

As mentioned in chapter 1, the relationship between CSR and EM is well scrutinized. The research of Kim et al. (2012) studied the association between CSR and EM and questioned whether social responsible firms delivered more transparent information about their financial information. Based on ethical, reputational and financial performance implications, Kim et al. (2012) propose that social responsible firms are less likely to manage their earnings. By testing this relationship using a sample of American firms over the period of 1991-2009, Kim et al. (2012) find that social responsible firms are less likely to engage in EM.

There is however research that hypothesizes a positive effect of CSR on EM and Chih et al. (2008) confirm that prior research to the relationship between CSR and EM has provided mixed results. By drawing on agency theory Prior et al. (2008), hypothesize that CSR has a positive effect on EM. The reasoning of Prior et al. (2008) holds that managers use CSR to improve the reputation of the firm which leads to less questioning of the accuracy of the financial statements by outside investors and employees. Findings of Prior et al. (2008) confirm their reasoning as a positive relationship between CSR and EM was found by their statistical analysis of a multinational sample over the period of 2002-2004. Bozzolan et al. (2015) hypothesize the relationship between CSR and EM more precise as the authors argue that firms with a higher degree of CSR orientation are less likely to use REM and more likely to use AEM, if these firms engage in EM. The main argument of Bozzolan et al. (2015), is that REM is more costly and harmful for future performance and a positive relationship between CSR and firm performance is assumed. The findings of Bozzolan et al. (2015) suggest that firms that are CSR-oriented will less likely engage in Real Earnings Management (REM) than in Accrual-based Earnings Management (AEM), over the period between 2003 and 2009. Cho and Chun (2016) confirm the negative relationship between CSR and REM in Korea over the period of 2005-2010, as they find that firms that are more socially responsible engage less in REM.

Given the mixed results of prior research, Grougiou et al. (2014) approach the CSR-EM relationship as a bidirectional relationship and find a positive relationship between CSR and EM for U.S. listed commercial banks over the period of 2003-2007. Given the mixed outdated results of prior research it can be concluded that the CSR-EM relationship needs further scrutiny. It can also be concluded that results of prior research tend to be country or sector specific.

There are several implications behind the CSR practices of firms.The ethical implications of CSR hold that managers have ethical incentives to conduct the business operations in a honest and

trustworthy way (Kim et al., 2012). From the ethical standpoint a negative association is expected between CSR and EM, because managers that are driven by ethical imperatives are expected to make responsible decisions which enhances the transparency of the organizational practices. Managers that are driven by their ethical responsibilities embrace those activities society expects them to embrace (Carroll, 1979).

CSR-Activities are seen as reputation-enhancing activities and the preference to maintain the enhanced reputation limits managers to perform activities that are socially undesirable (Linthicum, Reitenga & Sanchez, 2010). By behaving in a responsible way firms build a social responsible reputation, following the reputational implication managers will have a desire not to harm the reputation by engaging in EM (Kim et al., 2012). As investing in CSR-practices is costly and not in line with the shareholder return maximization principle, harming the enhanced reputation by performing unacceptable practices will result in more damage at the expense of the shareholders (Grow, Hamm & Lee, 2005). Therefore following the reputational implication, a negative association between CSR and EM is expected within this research.

The financial performance implication holds that CSR leads to an improved financial performance of a firm, and the increased financial performance reduces the tendency for firms to misrepresent the financial result of the firm in the annual report by engaging in EM (Kim et al., 2012). Following the ethical, reputational and financial performance implications reasoning of Kim et al. (2012) the following hypothesis is formed for this research. This research assumes that social responsible firms will less likely engage in EM, because managers have an ethical imperative to do the right thing since this is beneficial to the firm (Jones, 1995).

Hypothesis 1: CSR performance is negatively related to EM

Figure 1: Libby boxes visually portraying hypothesis 1

9
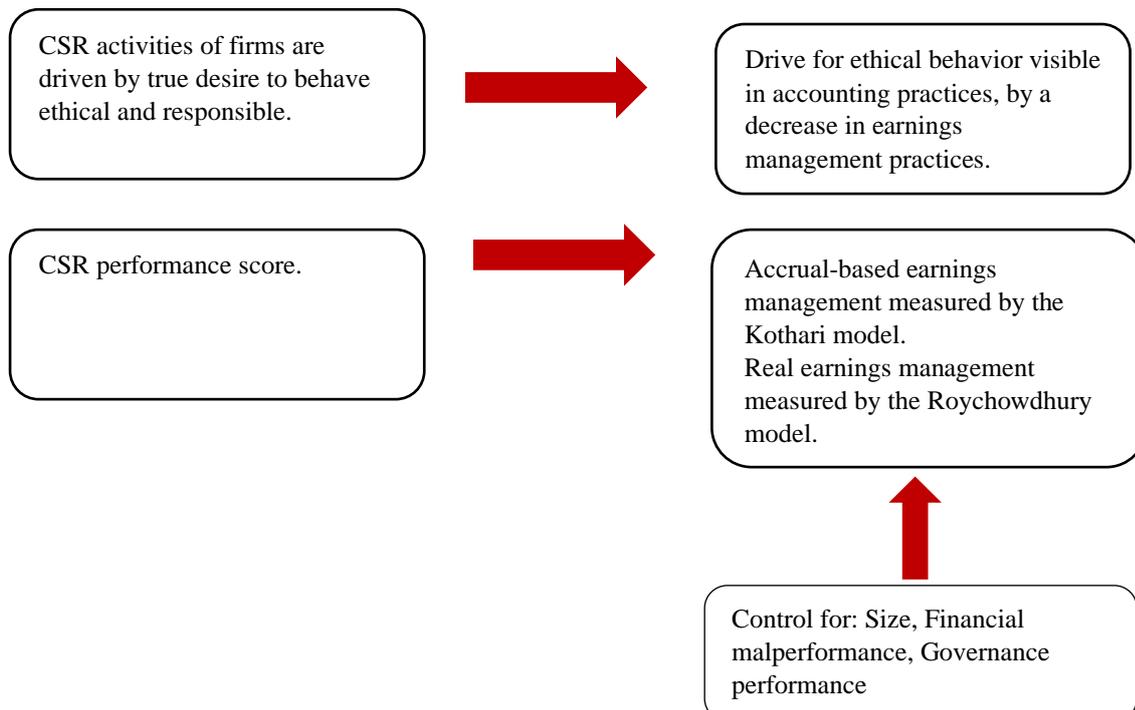
Institutional factors

As stated in chapter 1 the little existing knowledge on the effects of institutional factors on the relationship between CSR and EM is outdated, country specific or industry specific. According to institutional theory firms are part of a network of institutions and operate within the boundaries of this network (Campbell, 2007). This network can be seen as the rules of the game that are devised by humans and shape interaction between humans (North, 1990). Besides organizations, governments and bureaucracies, norms and values that prevail within a country can be understood as institutions (Fifka & Pobizhan, 2014). The prevailing institutions within a country are known to have significant influence over organizational decision-making. According to stakeholder theory, homogeneous behavior will occur among businesses that operate within the same institutional environment (Campbell, 2007). It is therefore of relevance to include institutional factors as variables that can affect the CSR-EM relationship.

Prior research proved that CSR as well as CSR practices are dependent on the institutions that form the national identity and therefore varies across different countries (Khanna, Kogan & Palepu, 2006). The study of Chapple and Moon (2005) finds that CSR practices of Asian firms do not depend on the gross national product (GNP) of a country but on embedded philanthropic traditions within countries. India, for instance, has the lowest GNP of the sample but the highest level of CSR development of all countries from the sample. Chapple and Moon (2005), state that this high level of CSR development is due to the well-established philanthropic traditions within India that are driven by religious origins. Shifting the focus towards managers' perceptions of CSR, Shafer, Fukukawa and Lee (2007), found more prove that CSR depends on the prevailing institutions of a country. Their findings show that Chinese managers, that are collectivistic oriented and not individualistic oriented, emphasize their focus more on shareholder well-being than on operating in an ethical responsible way.

Besides impacting and shaping CSR and CSR practices, the prevailing institutional environment affects the accounting practices as well. Countries can have different standards for financial reporting and domestic firms therefore report different information for the same measurement compared to firms within another country, which enlarges hindrances for foreign outside investors (Wijayana & Gray, 2019). Within countries that have a strong institutional environment recognized by close monitoring of financial reports, mandatory disclosure requirements and high risk of litigation, firms tend to yield more disclosure than firms within countries with a more weak environment (Frost & Pownall, 1994). Having better regulations and enforcement of these regulations, causes financial reporting to be more effective and trustworthy as it decreases potential earnings manipulating possibilities for insiders (La Porta et al., 2000).

Within the existing knowledge, investor protection is a well-respected proxy for formal institutional factors with regards to explaining the policy choices of a firm (La Porta et al., 2000; Leuz et al., 2003). Investor protection protects the rights of the minority shareholders and decreases the possibility of their rights being expropriated by managers of the firms these minority investors have invested in (La Porta et al., 2000). The studies of Defond et al. (2007) and Lang et al. (2006) provided evidence for investor protection affecting accounting practices. The results indicated that within countries with strong investor protection firms engaged less in earnings management compared to firms located in countries with weaker investor protection. The study of García-Sánchez and García-Meca (2017) studied the moderating role of institutional factors, operationalized by investor protection and bank regulation, on the relationship between CSR and EM among banks across the world. Results of their statistical analysis showed that the relationship between CSR and EM was stronger negative for banks in countries with higher level of investor protection and better regulation, over the period of 2004-2010. Martínez-Ferrero et al. (2016) scrutinized the possible bidirectional relationship between CSR and EM and the moderating effects of investor protection and stakeholder protection as institutional factors on this relationship. The authors found that the relationship between CSR and EM was inverse and that this relationship was stronger for firms operating in countries where there was more institutional pressure regarding the CSR practices of the firms between 2002 and 2010. Studying the direct relationship between investor protection and CSR and between investor protection and EM in ten Asian countries, Scholtens and Kang (2013) found a positive relationship between investor protection and CSR as well as a negative relationship between investor protection and EM.

Explanation for the moderating effect of institutional factors according to prior knowledge is that, better institutional context in the form of investor protection of a country decreases the possibilities for managers to pursue their own benefits over those of other stakeholders. Based on the reviewed literature a negative moderation of institutional factors is expected, meaning that a better institutional environment measured as investor protection strengthens the assumed negative relationship between CSR and EM. The following hypothesis is formed.

Hypothesis 2: Investor protection negatively moderates the proposed negative association between CSR and EM.

Figure 2: Libby boxes visually portraying hypothesis 2

11
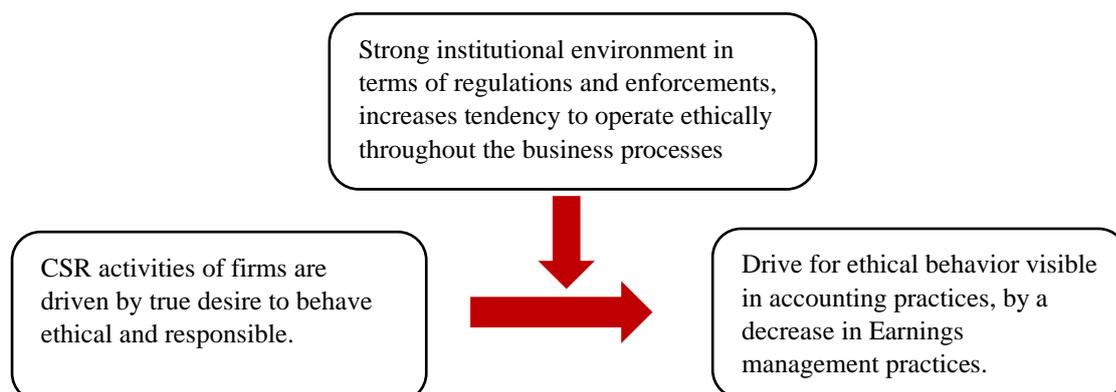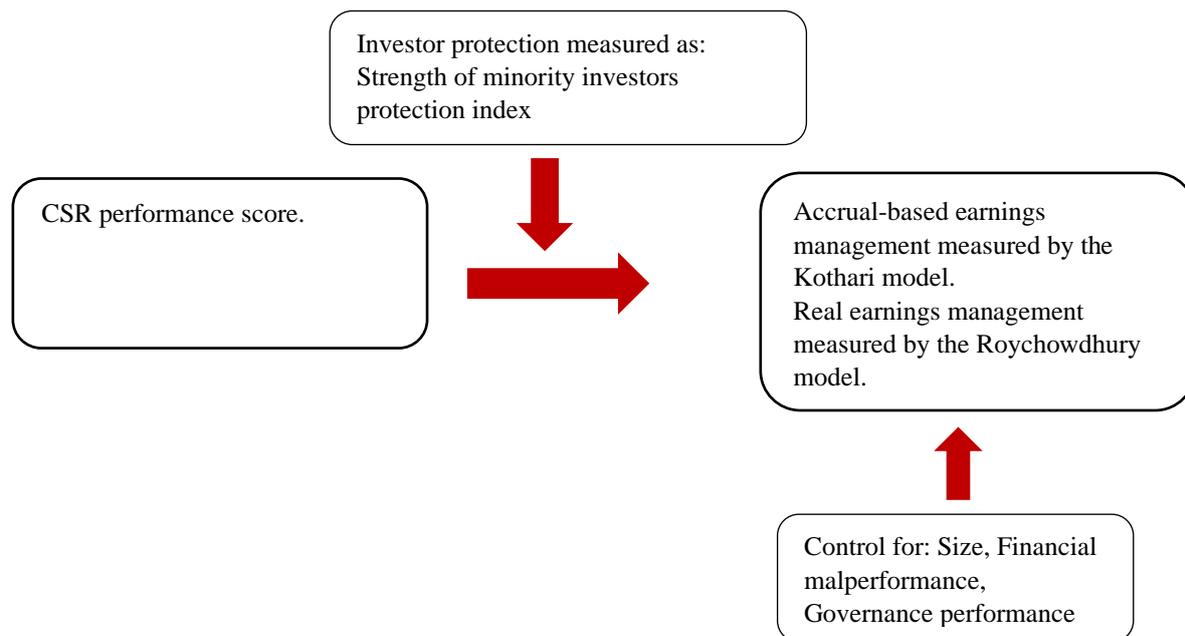
Cultural factors

Besides detecting the moderating effect of formal institutional factors on the CSR-EM relationship, García-Sánchez and García-Meca (2017) express the need for further scrutiny that includes cultural factors (informal) as possible moderators on the CSR-EM relationship. Despite the lack of research regarding the effect of cultural factors on the CSR-EM relationship, prior studies have studied the association between CSR and cultural factors and between EM and cultural factors. However, researches that study the association between EM and cultural factors are rare. Culture can affect both CSR as well as accounting practices within a country. According to Parsa et al. (2016), there are differences between the aim of the Chinese CSR practices and the aim of Western CSR practices. Chinese CSR practices are more focused on establishing harmony among the society than Western CSR practices (Parsa et al., 2016). Whereas Haniffa and Cooke (2002) conclude from their study that cultural factors can affect accounting practices in a country, as they assume that accounting is a socio-technical activity that consists of interaction between human and non-human factors. Accounting practices can't be regarded as free of cultural influences. The study of Ringov and Zollo (2007) studied the effect of cultural differences on both social and environmental performance, by use of a sample consisting of firms from 23 different countries. Their findings implicate that power distance and masculinity have a negative effect on social and environmental performance. In line with these findings Waldman et al. (2006), found a negative association between power distance and how top management values CSR performance of their firm studying firms within 15 countries spread across five continents. A positive association between power distance and EM was found by Paredes and Wheatley (2017), whereas the authors found a negative association between individualism, masculinity, uncertainty avoidance and EM. By testing whether agency costs that are driven by

cultural factors could explain earnings quality in South-East Asian countries, Putra, Pagalung and Habbe (2018) found that low agency costs that are driven by cultural factors results in a lower degree of EM engagement.

Culture can be defined as an informal institutional structure containing shared beliefs, traditions, values, norms, or religion (Hofstede, Hofstede & Minkov, 2010). According to institutional theory, the institutional framework within a country is shaped by culture and the institutional framework frames the relationships between economic actors and thus organizational behavior (Williamson, 2000). Besides shaping the institutional framework of a nation, culture forms the identity of the various stakeholders of the organizations within the nation. The expectations that stakeholders have on the role of organizations in performing CSR practices depend on how the interests and needs of the stakeholders are defined (Matten & Moon, 2008). According to Hofstede et al. (2010) these expectations depend on the following cultural dimensions: degree of power distance, masculinity versus femininity, individualism versus collectivism, degree of uncertainty avoidance.

Within countries that are perceived to have high power distance, firms often contain a top-down approach and there is less involvement from employees in the decision-making process (Ringov & Zollo, 2007). Power is often centralized within these countries and can only be exercised by a small percentage of the population. This small group determines the collecting and distributing process of the available scarce resources within these countries. The inequality of the division of power is accepted by those who don't, or to a small degree, have the ability to exercise power under the condition that they receive a fair treatment of the dominant group that has the power (De Jong, 2011). A high degree of power distance is often associated with not being instrumental in adopting a stakeholder oriented management approach (Ringov & Zollo, 2007). Managers of firms within high power distance countries are often perceived to be less concerned with the needs of the stakeholders and more concerned with their personal needs. Therefore a negative association between power distance and CSR performance can be expected. These managers also have the power in managing accounting decisions and therefore Paredes and Wheatley (2017) state that a positive association should be expected between power distance and EM engagement. Following the negative association between the degree of power distance and the CSR performance of a firm and positive association between the degree of power distance and EM, this thesis expects a positive moderation of power distance. This implies that a higher degree of power distance has a mitigating effect on the proposed negative association between CSR performance and EM.

According to Kim et al. (2012) within countries that are characterized as 'masculine', opportunistic behavior is not something that is uncommon and could explain why firms use CSR to cover their EM practices. A feministic culture is known for having care and quality of life as central aspects. The differences between feminine and masculine cultures could lead to differences in the

origins of CSR practices from firms located in countries with different cultures. Where firms in feminine cultures might have the well-being of the society as genuine basis of their CSR practices, firms in masculine countries might be more opportunistic and have covering opportunistic practices as EM as their basis for using CSR. Besides that, firms in feminine countries might engage less in EM than firms in masculine countries. According to Hofstede (1980), a high level of masculinity is characterized by egocentrism, priority of economic growth and importance of money. Managers within masculine cultures would therefore engage in EM easier than managers within feminine cultures, as they would prioritize reaching their performance goals by manipulating earnings over operating carefully because of the fact that their activities might be monitored. Following the reasoning of the effect of masculinity and femininity on the basis of CSR practices, a positive moderation is expected for masculine countries whereas a negative moderation is expected for feminine countries.

With regards to individualism, little is known about its association with CSR. Ioannou & Serafeim (2012) found a positive association between individualism and CSR performance. Reasoning behind this association is that different stakeholders possess a higher degree of freedom to determine the best strategy in individualistic cultures. This could therefore result in CSR becoming a tool in strategic decision making processes of the stakeholders. A higher degree of individualism could also positively affect the degree of EM engagement, as accountants and the financial statement preparers are prone to report the financial results as optimistic as they are allowed to (Han et al., 2010). This research however expects a positive moderation of the degree of individualism and a negative moderation of the degree of collectivism within a country on the negative association between CSR and EM.

Finally for countries that are characterized for a high degree of uncertainty avoidance can be seen as more conservative. These societies are perceived as rule- and routine-oriented and uncertainty-avoiding cultures have a lower degree of innovation (Ringov & Zollo, 2007). Given the low degree of openness to new practices to organizational life a negative association could be expected between uncertainty avoidance and CSR performance. According to Paredes and Wheatley (2017) the effect of uncertainty avoidance on EM could be twofold. On the one hand the perceived conservatism could lead to firms prefer engaging in REM over AEM to reduce the risk of negative assessment of AEM. And on the other hand the conservatism might hold the firm from engaging in REM to avoid the risk of the damaging effects REM to the financial performance of the firm in the long term. This research assumes that a lower degree of uncertainty avoidance leads to higher degree of firms engaging in EM and higher CSR performance for firms within this country. A negative moderation of uncertainty avoidance on the proposed negative association between CSR and EM is expected in this research, implying that firms within uncertainty avoiding countries operate with more risk. The afore explained reasoning results in the composition of the following hypotheses.

Hypothesis 3a: The degree of power distance positively moderates the proposed negative association between CSR and EM.

Hypothesis 3b: The degree of masculinity positively moderates the proposed negative association between CSR and EM.

Hypothesis 3c: The degree of femininity negatively moderates the proposed negative association between CSR and EM.

Hypothesis 3d: The degree of individualism positively moderates the proposed negative association between CSR and EM.

Hypothesis 3e: The degree of collectivism negatively moderates the proposed negative association between CSR and EM.

Hypothesis 3f: The degree of uncertainty avoidance negatively moderates the proposed negative association between CSR and EM.

Figure 3: Libby Boxes visually portraying H3a-f

3a: Higher power distance leads to less care about stakeholders and easy acceptance of accounting practices

3a: Power Distance Index (PDI)

3b: More masculinity leads to more opportunistic basis of business operations

3b: Masculinity versus Femininity index

3c&d: More individualism leads to opportunistic use of CSR and flawed accounting practices to pursue personal benefits.

3c&d: Individualism versus Collectivism index

3e&f: More uncertainty avoiding causes managers to avoid risks of investing in CSR as well as engaging in earnings management

3e&f: Uncertainty avoidance index

CSR activities of firms are driven by true desire to behave ethical and responsible.

CSR performance score.

Drive for ethical behavior visible in accounting practices, by a decrease in Earnings management practices.

Accrual-based earnings management measured by the Kothari model.
Real earnings management measured by the Roychowdhury model.

Control for: Size, Financial malperformance, Governance performance

3. Method

3.1 Sample & Data

This research is of quantitative nature and the relationship will be tested by the use of a panel data set. The sample consists of the largest listed firms from 17 different countries spread across the world over the period of 2010 up until 2018. Table 1 provides an overview of the amount of firm year observations per country and its percentual share of the total dataset.

Table 1. Observations per country

Country	Frequency	Percentual share	Cumulative share
Australia	104	2.4%	2.4%
Brazil	339	7.8%	10.2%
Canada	222	5.1%	15.3%
China	283	6.5%	21.8%
Japan	1039	23.9%	45.7%
France	161	3.7%	49.4%
Germany	413	9.5%	58.9%
Hong Kong	87	2.0%	60.9%
Italy	30	0.7%	61.6%
Netherlands	113	2.6%	64.2%
New Zealand	22	0.5%	64.7%
Russia	174	4.0%	68.7%
South Korea	221	5.1%	73.8%
Spain	30	0.7%	74.5%
Sweden	152	3.5%	78.0%
United Kingdom (UK)	400	9.2%	87.2%
United States (US)	557	12.8%	100%
Total	4347	100%	100%

All CSR data is gathered through the ASSET4 database, financial data is retrieved from Worldscope, whereas investor protection and cultural data are respectively retrieved from Worldbank and Hofstede. Since the data is gathered from firms spread across the world, original financial data was obtained in different currencies. This would potentially harm the generalizability of the results, therefore to correct for this all financial data was denominated in Euros (€). After the data is gathered a thorough statistical analysis will be conducted in order to test the hypotheses.

3.2 Variables

Accrual-based Earnings Management (AEM)

Within this research, EM is the dependent variable. As mentioned, a distinction can be made when defining EM. Namely accrual-based EM (AEM) and real EM (REM). In line with prior research (Martinez-Ferrero et al., 2016; Kim et al., 2012), the Kothari model (Kothari, Leone & Wasley, 2005) will be used in this research to analyze accrual-based earnings management. This model is adopted to estimate the discretionary accruals. The Kothari model is an advanced cross-sectional version of the Modified Jones Model (Jones, 1991), which corrects for firm performance by including the return on assets (ROA_{it}) in the equation that estimates the accruals. As the total amounts of accruals are expected to differ from zero if a firm experiences superior financial performance within the same fiscal year. Besides correcting for firm performance, the Kothari model corrects for industry specific factors.

The focus on the discretionary part of the accruals provides insights in the part of the accruals that could be subject to manipulation, therefore a distinction should be made between discretionary and non-discretionary accruals (Martinez-Ferrero et al., 2016). In order to eventually estimate the amount of discretionary accruals, the first step of the model is to estimate the total amount of adjusted accruals by use of the following equation.

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 + \alpha_1\left(\frac{1}{A_{it-1}}\right) + \alpha_2\left(\frac{\Delta(REV_{it})}{A_{it-1}}\right) + \alpha_3\left(\frac{PPE_{it}}{A_{it-1}}\right) + \alpha_4 ROA_{it} + \varepsilon_{it} \quad (1)$$

In order to determine the discretionary proportion of the total accruals, step two is to determine the non-discretionary proportion of the total accruals. Equation 2 projects the equation for determining the non-discretionary accruals (NDA_{it}). Following equation 2 the discretionary accruals (DA_{it}) result from subtracting the non-discretionary accruals (NDA_{it}) from the total amount of adjusted accruals ($\frac{TA_{it}}{A_{it-1}}$), this is visually represented in equation 3.

$$NDA_{it} = \alpha_0 + \alpha_1\left(\frac{1}{A_{it-1}}\right) + \alpha_2\left(\frac{\Delta(REV_{it} - REC_{it})}{A_{it-1}}\right) + \alpha_3\left(\frac{PPE_{it}}{A_{it-1}}\right) + \alpha_4 ROA_{it} + \varepsilon_{it} \quad (2)$$

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it} \quad (3)$$

Within equation 1 up until 3, TA_{it} represents the total amount of accruals of firm i in year t. The total amount of accruals is estimated by use of the balance sheet method instead of the cashflow method. The total amount of accruals according to the cashflow method is estimated by subtracting net cash from operations from the net profit. According to Larson, Sloan & Giedt (2018), adopting the balance sheet method provides a less flawed estimation of the total accruals, since the working capital

is excluded and the foundation of noncurrent operating accruals is not incorporated in the cashflow method. By adoption of the balance sheet method the total accruals are estimated as follows.

$$TA_{it} = \frac{(\Delta CA_{it} - \Delta CL_{it} - \Delta CASH_{it} + \Delta STDEBT_{it} - DEP_{it})}{A_{it-1}} \qquad (4)$$

Table 2. Variable description AEM

Variable	Description
TA_{it}	Total amount of accruals for firm i, in year t
$\Delta(REV)_{it}$	Change in amount of revenue for firm i in year t, compared to revenue for firm i in year t-1
PPE_{it}	Property, plant, and equipment for firm i, in year t
ROA_{it}	Return on assets for firm i, in year t
$\Delta(REC)_{it}$	Change in amount of accounts receivable for firm i in year t, compared to accounts receivable for firm i in year t-1
A_{it-1}	Total amount of assets for firm in year t-1
ΔCA_{it}	Difference between current assets for firm i in year t and year t-1
ΔCL_{it}	Difference between current liabilities for firm i in year t and year t-1
$\Delta CASH_{it}$	Difference between cash and cash equivalents for firm i in year t and year t-1
$\Delta STDEBT_{it}$	Difference between short term debt for firm i in year t and year t-1

| DEP$_{it}$ | Depreciation and amortization expense for firm i, in year t |

Real Earnings Management (REM)

To analyze real earnings management the real activities manipulation model of Roychowdhury (2006) is used in this research, this model detects real earnings management based on three different proxies. The three different proxies represent the three different manners in which managers possess the ability to manipulate the earnings of their firm. The activities that can lead to manipulation of the earnings are increasing production of inventory and therefore reduce the total production costs, increase the pace of selling the products and cut in discretionary expenses such as R&D costs.

Managers can achieve lower production costs by realizing overproduction of the inventory. Unnecessarily overproducing inventory enables managers to spread the fixed overhead over more separate units that are produced. This results in a reduction of the cost of goods sold which therefore increases the gross margin of the firm. In line with prior research (Roychowdhury, 2006; Cohen et al., 2008), in order to determine the level of production costs (PRODUCTION) two separate regressions of cost of goods sold (COGS) and the change in inventory (ΔINV) must be run since: PRODUCTION$_{it}$ = COGS$_{it}$ + ΔINV$_{it}$. Equations 5 and 6 represent the separate regressions respectively. Combining equation 5 and 6 will provide the estimated level of production costs (PRODUCTION), this is represented in equation 7. A high positive residual of equation 7 indicates REM, since it implies that production costs are abnormally high.

$$\frac{COGS_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}}\right) + \beta_1 \left(\frac{Sales_{it}}{A_{it-1}}\right) + \varepsilon_t \qquad (5)$$

$$\frac{\Delta INV_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}}\right) + \beta_1 \left(\frac{\Delta Sales_{it}}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta Sales_{it-1}}{A_{it-1}}\right) + \varepsilon_t \qquad (6)$$

$$\frac{PRODUCTION_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}}\right) + \beta_1 \left(\frac{Sales_{it}}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta Sales_{it}}{A_{it-1}}\right) + \beta_3 \left(\frac{\Delta Sales_{it-1}}{A_{it-1}}\right) + \varepsilon_t \quad (7)$$

In order to manipulate the earnings managers can increase sales on a short term basis by selling their products with unusual discounts and more tolerant terms for credit agreements. Despite the temporal increase in earnings, this increase of sales volume will however result in a lower cash flow from operating activities (CFO$_{it}$) for that given period. By regressing equation 8 and taking the residuals, an indication is provided on whether firms engage in REM. Lower negative residuals

indicate a lower CFO$_{it}$ than normal, which indicates that earnings are manipulated via an increase of the sales for a given period.

$$\frac{CFO_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}}\right) + \beta_1 \left(\frac{Sales_{it}}{A_{it-1}}\right) + \beta_2 \left(\frac{\Delta Sales_{it}}{A_{it-1}}\right) + \varepsilon_t \qquad (8)$$

The third option for management to manage earnings through real activities manipulation is cutting in the discretionary expenses (DISCEX$_{it}$). Discretionary expenses are expenses that don't directly relate to the production of the goods or service a firm sells. These expenses include research & development expenses, marketing and advertising expenses and selling, general, and administrative expenses. Unnecessarily cutting these expenses will move the total amount of earnings in an upward direction. In line with production costs and cashflow from operating activities, a lower negative residual of equation 9 indicates REM through cutting in discretionary expenses.

$$\frac{DISCEX_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}}\right) + \beta_1 \left(\frac{Sales_{it-1}}{A_{it-1}}\right) + \varepsilon_t \qquad (9)$$

Combining the three residuals of the three proxies for REM results in the final total proxy for REM, visually displayed in equation 10. Adopting the reasoning of Braam et al. (2015), inverse values of the residuals of DISCEX$_{it}$ and CFO$_{it}$ are reported in this thesis for interpretation purposes. Since higher positive residuals of equation 7 indicate overproduction and lower negative residuals of 9 and 8 indicate cutting in discretionary expenses and boosting sales of products.

$$REM = A_{PROD} + A_{CFO} + A_{DISCEX} \qquad (10)$$

Table 3. Variable description REM

Variable	Description
COGS$_{it}$	Cost of goods sold for firm i, in year t
ΔINV$_{it}$	Difference between the amount of inventory for firm i in year t and year t-1
PRODUCTION$_{it}$	Normal amount of production costs for firm i, in year t. Calculated as sum of COGS$_{it}$ and ΔINV$_{it}$
CFO$_{it}$	Cash flow from operations for firm i, in year t

DISCEX$_{it}$	Amount of discretionary expenses for firm i, in year t. Measured as total of R&D expense, advertising expense and selling, general and administrative expense (SGA).
Sales$_{it}$	Net sales for firm in, year t
ΔSales$_{it}$	Difference between the net sales for firm i in year t and year t-1
ΔSales$_{it-1}$	Difference between the amount of inventory for firm i in year t-1 and year t-2
A$_{it-1}$	Total amount of assets for firm in year t-1
REM	Proxy for Real Earnings Management
A$_{PROD}$	Amount of abnormal production costs for firm i in year t
A$_{CFO}$	Amount of abnormal cash flow from operations for firm i in year t
A$_{DISCEX}$	Amount of abnormal discretionary expenses for firm i in year t

CSR Performance

The independent variable of this research is the CSR performance of a firm. The ESG score is used to represent the CSR performance of a firm and is based on three separate pillars which represent responsible behavior of a firm. These pillars separately indicate the Environmental, Social and Governance performance of a firm. Following the existing studies of (Kim et al. 2012; Alsaadi et al., 2016), governance performance is excluded from the independent variable and included as a control variable due to the fact that both CSR and corporate governance of a firm can affect the reporting

practices of a firm. In line with Braam & Peeters (2018), CSR performance is computed by calculating the sum of the Environmental and Social score and divide the sum by two. This assigns equal importance to the separate pillars.

The CSR data is retrieved from the ASSET4 database. The ESG score is a weighted average of the separate scores of the three separate pillars, all pillar scores are calculated based on multiple categories per pillar. These scores for these categories are determined based on multiple indicators for each category. Environmental score consists of the categories: Resource use, Emissions Reduction and Innovation. These categories respectively reflect the performance on finding and using eco-efficient resources, effectively reducing polluting emissions of the operational and production process, and ability of the firm to create new eco-designed products. The social score consists of 4 category scores: Workforce, Human Rights, Community, Product Responsibility. Workforce score projects the performance of a firm with regards to job satisfaction, employee diversity and health and safety of the workplace. The degree of respect towards human rights of a firm is measured by the Human Rights score, whereas the Community score gives an indication of the effort of a firm to be "a good citizen" as part of the community in which it operates. The final category score of Product responsibility measures the quality of the products and services with regards to health and safety of the customers. These seven categories combined are calculated based on 178 separate indicators, a detailed overview of the weights of the separate categories is provided in the appendix.

Institutional Factors

Formal and informal institutional factors serve as moderating variables within this research. The indicator for formal institutional differences is the level of investor protection within a country, which is in line with prior research (Leuz et al., 2003; La Porta et al., 200; Martinez-Ferrero et al., 2016). Data on the level investor protection is gathered from WorldBank and investor protection is measured as the strength of the protection for minority investors. The strength of minority investor protection is calculated as the sum of the following six separate indices: Disclosure index, Director liability index, shareholder suits index, shareholder rights index, ownership and control index, corporate transparency index.

The extent of disclosure index provides an indication of the disclosure and approval requirements for firms in a specific country with regards to related party transactions. The extent of directors possibly being held liable for damage to the firm due to related party transactions and how these directors can be sanctioned. A possible sanction is suing the firm for illegal corporate behavior and the ease of shareholder suits index indicates the ease of plaintiffs having access to evidence. Plaintiffs are the parties that start a lawsuit against other parties before the legal court does.

The prominence of the role of shareholders during the decision-making process of key corporate decisions is measured by the extent of shareholder rights index, whereas the rules that determine both the change and structure of the control within a company is measured by the extent of ownership and control index. The final index is the extent of corporate transparency index and indicates the degree of information with regards to their board and audits a firm is legally obliged to share with outsiders. The sum of these separate indices results in the strength of protection for minority investors index which is measured on a scale ranging from 0 up to 50. A detailed description of the components of the separate indices is provided in the appendix.

The cultural dimensions of Hofstede et al. (2010), are applied in this research to operationalize cultural factors as informal institutional factors. The four cultural dimensions obtained in this research are power distance (PDI), masculinity versus femininity (MAS), individualism versus collectivism (IND), and uncertainty avoidance (UA). These dimensions are based the comprehensive research of Hofstede (1980), in which the author analyzed how culture influenced the workplace environment. The value of the power distance index displays the degree of inequality among different persons is accepted within a society. A high level of power distance indicates that people within this society effortlessly accept hierarchical orders and hardly question their place within this order. Whereas people in countries with a low value for the power distance index, inequalities and hierarchical orders should be justified. Power distance index is scaled on a 1-100 scale where a higher score indicates a higher degree of power distance. The masculinity versus femininity index projects the degree of masculinity or femininity for a certain society, where 50 is the midpoint. A score larger than 50 indicates that a society is masculine and more competitive and prefers achievement and rewards for success, with 100 being the highest degree of masculinity possible. Scores below 50 indicate a higher degree of femininity within the particular society, where cooperation and quality of life is preferred. The lower the score below 50 on the masculinity versus femininity index the higher the degree of femininity within this society. In line with the masculinity versus femininity index, the individualism versus collectivism index ranges from 1-100 with 50 being the midpoint indicating a society can be defined as collectivistic or individualistic when the score is larger or smaller than 50. A score above 50 on the individualism versus collectivism index indicates an individualistic society, which is recognized by common expectations for individuals to only take care of themselves or their close relatives. When a society scores below 50 it can be recognized as collectivistic and within these societies there is a consensus "we" feeling instead of an "I" feeling, people take care of each other and there is unquestioned loyalty among persons within a group. The final dimension of culture in this research is the degree of uncertainty avoidance. The degree of uncertainty avoidance within a society is measured on a 1-100 scale, where a higher score indicates a higher degree of uncertainty avoidance. High uncertainty avoidance is characterized by a society that feels uncomfortable when it faces

uncertain situations. All cultural data used in this research is retrieved form The Hofstede Centre (2016).

To test the moderating effects of the institutional factors an interaction term is included in the statistical analysis. Within the analysis the interaction variables are centered, by subtracting the mean of each variable from each value of that specific variable. By using centered variables within the interaction analysis, it is prevented that the main effects of these interaction variables represent their effect on the dependent variable in which the value of the other interaction variable has a value of 0.

Control variables

Control variables are added to the equation in order to minimize the possibility of a correlated variable being omitted. According to Roychowdhury (2006), EM can potentially be explained by specific growth opportunities for each firm. As indicated in prior knowledge (Prior et al., 2008; McWilliams & Siegel, 2000), firm size also affects CSR performance of a firm following the reasoning that larger firms might have more resources to invest in CSR practices. To control for firm size, market-to-book value (MBV) is added as a control variable to the model. Besides firm size, poor firm performance could incentivize managers to engage in EM (Scholtens & Kang, 2012). Therefore in line with prior research (Kim et al., 2012; Prior et al., 2008) leverage (LEV), measured as debt-to-equity ratio, is included as a control variable. Kim et al. (2012), isolate the ethical intentions of CSR activities of firms by including lagged financial performance measures as control variables. In line with Kim et al. (2012), this research adds lagged return on assets (ROA_{t-1}) to the model. Governance score is excluded from the composition of the CSR score but will be included as a separate control variable calculated by the average of the annual governance score (Hoi et al., 2013; Kim et al., 2012).

Table 4. Control variables description

Variable	Description
MBV_{it}	Market-to-book Value of firm i in year t. Measured as $MBV_{it} = \dfrac{Market\ Capitalization_{it}}{Net\ Book\ Value_{it}}$
LEV_{it}	Leverage of firm i, in year t. Measured as $LEV_{it} = \dfrac{Short\ Term\ Debt_{it} + Long\ Term\ Debt_{it}}{Total\ Assets_{it}}$
ROA_{it-1}	Return on assets for firm i, in year t-1.
GOV_{it}	Governance Score for firm i, in year t

3.3 Regression Equations

To test the proposed hypotheses of the research by use of the discussed variables, the following regression equations are estimated. An overview is provided which matches the proposed hypotheses to its matching econometric equation. Within the equations a multiplication sign (*) following CSR_{it} indicates an interaction term which is added to test the moderating effect of the following variable. Descriptions of the variables within the equations are provided in table 6.

Hypothesis 1:

$$EM_{it} = \beta_0 + \beta_1 CSR_{it} + \sum \beta_{2..n} CONTROL_{it} + YEAR_i + SIC_{it} + \varepsilon_{it}$$

Hypothesis 2:

$$EM_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 IP + \beta_3 CSR_{it} * IP + \sum \beta_{4..n} CONTROL_{it} + YEAR_i + SIC_{it} + \varepsilon_{it}$$

Hypothesis 3a-3f:

$$EM_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 PDI + \beta_3 MAS + \beta_4 IND + \beta_5 UA + \beta_6 CSR_{it} * PDI + \beta_7 CSR_{it} * MAS$$
$$+ \beta_8 CSR_{it} * IND + \beta_9 CSR_{it} * UA + \sum \beta_{10..n} CONTROL_{it} + YEAR_i + SIC_{it} + \varepsilon_{it}$$

Table 5. Description of equation variables

Variable	Description
EM_{it}	Proxy for Earnings management, operationalized as AEM and REM for firm i, in year t
CSR_{it}	CSR performance for firm i, in year t
IP	Level of investor protection within a country
PDI	Degree of power distance within a country
MAS	Degree of masculinity or femininity within a country
IND	Degree of individualism or collectivism within a country
UA	Degree of uncertainty avoidance within a country
CONTROL	Summation of the control variables described in table 5
YEAR	Year proxy which controls for year fixed effects
SIC	Four digit industry code (SIC), to control for industry fixed effects

4. Empirical analysis

An analysis of the empirical observations of this research is described and provided in this chapter. This chapter follows a structure which at first provides an elaboration on the descriptive statistics of the main variables of the sample. The descriptive statistics are followed by an analysis of the Pearson correlation matrix, which provides insights in correlation between the variables of this research. After the analysis of the Pearson correlation matrix, the regression results are analyzed in order to test the hypotheses and this section concludes with an overall robustness check.

4.1 Descriptive Statistics

The empirical analysis starts with an analysis of the descriptive statistics of the full sample of this research. This analysis provides the first general insights into the data, the final full sample consists of 4347 firm-year observations spread across 17 different countries. The descriptive statistics are displayed in table 6, consisting of the number of observations, the mean value, standard deviation and minimum and maximum value of each variable.

Table 6. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
AEM	4347	-.002	.044	-.417	.44
REM	4347	0.000000000106	.211	-1.778	1.011
CSR	4347	53.788	23.813	3.275	97.435
IP	4347	34.089	4.173	28	43
PDI	4347	50.828	15.69	22	93
IDV	4347	59.903	24.341	18	91
MAS	4347	64.354	23.612	5	95
UAI	4347	64.741	24.066	29	95
GOV	4347	58.749	21.713	1.26	98.65
LEV	4347	23.980	15.595	5.86	132.3
MBV	4347	2.18	37.42	-1433.75	1404.81
ROA_{t-1}	4347	5.978	7.423	-53.22	66.95

Compared to prior literature of Kim et al. (2012), the sample of this research provides a negative mean for accrual-based earnings management (AEM) and a positive mean for real earnings management (REM), whereas Kim et al. (2012) found a positive mean for AEM and a negative mean for REM. The mean values for AEM and REM in this research indicate that for firms across the sample managing earnings through REM is slightly favored over managing earnings through AEM, which is contradictory to the found mean values for these proxies by Kim et al. (2019).

The mean value for Corporate Social Responsibility Performance (CSR) for firms within this sample is 53.788 on a scale of 0 up until 100. Implying that the firms in this sample together perform

well on average. The mean value of 34.089 for IP indicates that across the 17 different countries that are represented in this sample, the mean strength of the minority investors is 34.089. This IP index ranges on a scale from 1 to 50, it can therefore be implied that the minority investors are protected above average across the different countries in the sample.

Evaluating the cultural variables, it can be obtained that the countries across the sample have a mean value of: 50.828 for the power distance index (PDI), 59.903 for the individualism versus collectivism index (IDV), 64.354 for the masculinity versus femininity index (MAS), and 64.741 for the uncertainty avoidance index (AUI). Overall based on these results it can be stated that this sample is on average: individualistic, masculine, uncertainty avoiding and has an average power distance culture. The market-to-book value (MBV) is winsorized at a 99% level to correct for outliers.

4.2 Pearson Correlation

The Pearson correlation matrix is projected in table 7, this table shows the correlation between the variables that are included in this research. These coefficients vary on a scale from $-1 < 0 < 1$. If the correlation coefficient among two variables is between 0 and 0.3 the correlation can be seen as weak, whereas correlation coefficients between 0.3 and 0.7 are seen to be moderately correlated. Weak and moderate correlations are not problematic and don't require further action to correct the data. A correlation coefficient with a value above 0.7 is seen as problematic as this value implies a strong correlation among two variables, which could indicate that there is multicollinearity among the data. Multicollinearity could lead to biased estimates of the regression results.

Among the data of this research, a slight positive correlation is found between AEM and REM ($r=0.146$, $p < 0.01$). This evidence may suggest that these two forms of EM are complements and not substitutes. In line with Kim et al. (2012) a slight negative correlation between CSR and AEM is found among the data ($r= -0.053$, $p < 0.01$). But contradictory to the research of Kim et al. (2012), this research found a negative correlation between CSR and REM ($r = -0.106$, $p < 0.01$). Kim et al. (2012) state based on their found negative correlation between CSR and AEM, that this may suggest that better CSR performing firms are less likely to engage in accrual based earnings management.

No variables indicate extraordinary high correlations, which indicates that there may not be multicollinearity among the data. In order to further prove this indication, variance inflation factor tests were (VIF) performed. Neither VIF-test showed a VIF value of above 2.98, therefore it can be concluded that there is no possible danger of multicollinearity among the data of this research. The results of the VIF test included in appendix B

Table 7. Pearson Correlation Matrix

Variables	(1) AEM	(2) REM	(3) CSR	(4) IP	(5) PDI	(6) IDV	(7) MAS	(8) UAI	(9) GOV	(10) LEV	(11) MBV	(12) ROA_{t-1}
(1) AEM	1.000											
(2) REM	0.146***	1.000										
(3) CSR	-0.053***	-0.106***	1.000									
(4) IP	-0.049***	0.023	0.114***	1.000								
(5) PDI	0.028*	0.048***	-0.248***	-0.487***	1.000							
(6) IDV	-0.055***	-0.144***	0.201***	0.489***	-0.778***	1.000						
(7) MAS	0.050***	-0.012	-0.073***	-0.168***	0.042***	-0.175***	1.000					
(8) UAI	0.055***	-0.015	0.101***	-0.424***	0.374***	-0.465***	0.433***	1.000				
(9) GOV	-0.058***	-0.079***	0.479***	0.140***	-0.109***	0.131***	0.006	-0.018	1.000			
(10) LEV	0.042***	0.080***	0.021	-0.058***	0.087***	-0.052***	-0.102***	-0.003	0.048**	1.000		
(11) MBV	0.017	0.020	-0.010	-0.021	0.021	-0.021	-0.007	-0.011	0.012	-0.030**	1.000	
(12) ROA_{t-1}	-0.036**	-0.204***	-0.059***	0.132***	-0.056***	0.143***	-0.157***	-0.180***	-0.010	-0.190***	0.007	1.000

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

4.3 Regression Results

Within this section, the hypotheses formed in chapter 2 are tested by means of econometric analysis. The data of this research covers observations of multiple firms over multiple years, therefore the data is both cross-sectional as well as longitudinal at the same time. The dataset can therefore be classified as a panel dataset and in order to test the hypotheses, panel data analysis is an appropriate method of analyzing the data (Studenmund, 2016).

All regressions are tested for the presence of heteroskedasticity, by means of the Breusch-Pagan / Cook-Weisberg test. Each test provided a Prob > chi2 statistic of below 0.05, indicating that heteroskedasticity was present among the data. Heteroskedasticity implies that the variance of the error term is not constant, which could lead to biased coefficients and the testing of the hypotheses to be unreliable (Studenmund, 2016). To correct for heteroskedasticity, robust standard errors are used for each regression. All regressions are controlled for time fixed effects by adding year dummies.

Given that the dataset of this research consists of multilevel data, multilevel modelling has to be considered in order to analyze the data. The dataset contains variables on the country-level (institutional variables) as well as variables on the firm-level. After analyzing the intraclass correlation coefficients of both AEM (0.005) and REM (0.07), it was decided not to use multilevel modeling (Appendix B). Meaning that at most 7% of the variance is captured by the country-level variables. These values of intraclass correlation are rather low and multilevel modeling would result in poor reliability of the results (Koo & Li, 2016).

At first the association between CSR and EM is tested, followed by separate tests for the moderation of formal and informal institutional factors. In the end the section concludes with a robustness check of the results by comparing the results of the hypotheses for firms located in common law countries and civil law countries.

The association between CSR and EM

To test the association between CSR and EM across the total sample, a fixed effects regression was used after the result of the Hausman-test indicated that the use of a fixed effects regression suited the data better than a random effects regression. The results of the fixed effects regression are provided in table 8. The first column of the table provides the coefficients for the effects of the independent variable CSR and the control variables on accrual-based earnings management (AEM), whereas the second column projects their effects on real-activities earnings management (REM).

Hypotheses 1 expected a negative association between the CSR performance score and firms engaging in earnings management. The results indicate a slight negative insignificant relationship between CSR performance and both AEM and REM. Hypothesis 1 can therefore, based on these

results, be rejected. And thus it can be concluded that, within this sample, better CSR performing firms don't engage less in EM than worse CSR performing firms.

Considering the control variables, financial leverage (LEV) measured as debt-to-assets ratio has a positive significant effect on both AEM (0.00030; $p < 0.05$) and REM (0.00096; $p < 0.1$). This implies that the higher a firm's debt-to-assets ratio is the more they engage in EM. These findings are in line with the findings of literature (Scholtens & Kang, 2012; Kim et al., 2012; Prior et al., 2008), and suggest that poor financial performance may cause incentives for managers to manipulate their earnings. In line with the aforementioned reasoning a negative significant association between lagged return on assets (ROA$_{t-1}$) and REM (-0.0025; $p < 0.01$) was found. This indicates that a lower return on assets in the previous fiscal year leads to more real-activities earnings management in the current fiscal year. This suggests that poor financial performance in the form of lower return on assets provides incentives for managers to manipulate their earnings through real earnings management.

	AEM	REM
CSR	-0.000093	-0.00049
	(-1.19)	(-1.60)
GOV	-0.00010	0.00027
	(-1.66)	(1.45)
LEV	0.00030***	0.00096*
	(3.06)	(2.31)
MBV	0.000018	0.000062
	(0.57)	(1.35)
ROA$_{t-1}$	0.00013	-0.0025***
	(0.90)	(-3.84)
Constant	0.0016	-0.0018
	(0.01)	(0.02)
Year Dummies	Included	Included
Observations	4347	4347

Table 8. Fixed Effects Regression. T-values are displayed in parentheses. Significance is displayed by asterisks where *=p<0.1; **=p<0.05; ***=p<0.01

The moderating effect of formal institutional factors

In order to test the moderating effect of formal institutional factors on the relationship between CSR and EM, an interaction term (CSR*IP) that tests the interaction between CSR and the strength of minority investor protection (IP) was created. For interpretation purposes the values of CSR and IP are centered, meaning that for each value the mean of the variable was subtracted. The variables are centered, as without centering the main coefficients of the variables included in the interaction term would indicate their effect when the other variable has the value of zero. After centering, the coefficient of the main effect displays the effect when the other variable has a value equal to its mean.

The moderating effect of IP on the relationship between CSR and EM is tested by means of a random effects regression. The value of IP remains for most part constant over time and is rather rigid, a fixed effects model would therefore omit the IP variable and not include it in the model. A random effects model is therefore appropriate to analyze the data. The result of the Breusch-Pagan Lagrangian multiplier (BPLM) test provided extra confirmation for the appropriateness of the random effects model. The Prob > chibar2 statistic of 0.000 provided by the BPLM test confirms that the random effects model better suits the data than the pooled OLS model. The results of the random effects regression with robust standard errors are provided in table 9.

Hypothesis 2 expects a negative moderation of IP on the proposed negative relationship between CSR and EM. The results indicate that the found positive moderation of IP on the relationship between CSR and accrual based earnings management and the negative moderation of IP on the relationship between CSR and real earnings management, are both insignificant. It can therefore be concluded, based on these results, that formal institutional factors measured as strength of minority investor protection (IP) does not negatively moderate the relationship between CSR and EM. By means of the data and the statistical method hypothesis 2 can be rejected. A higher value for the strength of minority investor protection therefore doesn't lead to a more negative effect of CSR performance on EM.

Analyzing the other variables it can be noted that CSR is significantly negatively related to both AEM (-0.000079; $p < 0.05$) and REM (-0.00066; $p < 0.05$). Given that the interaction variables are centered, it can be interpreted that CSR has a negative effect of -0.000079 and -0.00066 on AEM and REM respectively when strength of minority investors protection within a country is 34.089 on a scale from 0 up until 50. In line with the findings provided in table 8, the leverage (LEV) and lagged return on assets (ROA_{t-1}) prove that financial malperformance provides incentives for managers to engage in EM. Besides the negative association between CSR and EM, a negative significant effect of governance performance (GOV) on AEM was found. Implying that a better governance performance is associated with less earnings manipulating through accrual-based earnings management.

	AEM	REM
CSR	-0.000079**	-0.00066**
	(-2.01)	(-2.39)
IP	0.0080	-0.49*
	(0.29)	(-1.90)
CSR*IP	0.000012	-0.000019
	(1.25)	(-0.32)
GOV	-0.000093**	0.00017
	(-2.44)	(0.93)
LEV	0.00014***	0.00095***
	(2.99)	(2.62)
MBV	0.000021	0.000063

	(0.76)	(1.43)
ROA$_{t-1}$	-0.000019	-0.0027***
	(-0.18)	(-4.16)
Constant	-0.25	15.5*
	(-0.28)	(1.89)
Year Dummies	Included	Included
Observations	4347	4347

Table 9. Random effects regression. Z-values are displayed in parentheses. Significance is displayed by asterisks where *=p<0.1; **=p<0.05; ***=p<0.01

The moderating effect of informal institutional factors

In line with the formal institutional factors, the moderating effects of the informal institutional factors is tested by a random effects regression with robust standard errors. Likewise the values for IP, the cultural variables that are used in this research to test the moderating effects of informal institutional factors are time invariant. And similar to the previous regression, interaction terms are formed by means of centered variables for interpretation purposes. At first this section will analyze the moderating effects of power distance (PDI) on the CSR-EM relationship and is followed by the analysis of the moderating effects of the degree of masculinity (MAS) on the CSR-EM relationship. After that the effect of the degree of individualism (IDV) and the effect of uncertainty avoidance (UAI) on the CSR-EM relationship are tested respectively.

Within this research it is hypothesized that the degree of power distance (PDI) has a positive moderating effect on the proposed negative CSR-EM relationship. The results however, projected in table 10, indicate that there is a negative moderating effect of PDI (-0.0000056; $p < 0.05$) on the CSR-AEM relationship. This indicates that the higher the degree of power distance within a country, the more negative the effect of CSR on accrual based earnings management becomes. Which is contradictory to the, in chapter 2 elaborated, arguments of this research. Based on these results, hypothesis 3a can rejected. It can be rejected because the degree of power distance does not positively moderate the CSR-EM relationship.

Similar to the findings of the results displayed in table 9, a negative significant coefficient for the main effect of CSR on both AEM and REM was found. Demonstrating that a better CSR performance leads to less earnings management in countries where the degree of power distance is equal to 50.828. Besides the negative effect of CSR on EM, the regression results indicate a positive significant effect of the degree of power distance (PDI) on both forms of earnings management. These positive coefficients imply that a higher degree of power distance leads to more earnings management for firms that have a CSR performance score of 53.788.

As far as the control variables concerned it can be noted that, in line with the afore run regressions financial leverage (LEV) and lagged return on assets (ROA$_{t-1}$) prove to be a significant predictor for

whether firms engage in earnings management or not. Besides the predicting power of financial malfunctioning of firms, firm's governance performance score again proves to be a reliable measure for predicting whether firms will engage in accrual-based earnings management.

	AEM	REM
CSR	-0.000082**	-0.00066**
	(-2.09)	(-2.37)
PDI	0.0015***	0.0074***
	(5.58)	(2.68)
CSR*PDI	-0.0000056**	-0.00000045
	(-2.45)	(-0.03)
GOV	-0.000095**	0.00018
	(-2.46)	(0.95)
LEV	0.00014***	0.00095***
	(2.96)	(2.62)
MBV	0.000020	0.000064
	(0.75)	(1.44)
ROA_{t-1}	-0.000028	-0.0027***
	(-0.27)	(-4.17)
Constant	-0.049***	-0.35**
	(-3.46)	(-2.41)
Year Dummies	Included	Included
Observations	4347	4347

*Table 10. Random effects regression, testing the moderating effect of power distance on the CSR-EM relationship. Z-values are displayed in parentheses. Significance is displayed by asterisks where *=p<0.1; **=p<0.05; ***=p<0.01*

Within table 11, the results of the regressions that tested the moderating effects of the degree of masculinity versus femininity are presented. The, within chapter 2 formed, hypotheses 3b 3c expect a positive moderation of masculinity and a negative moderation of femininity on the CSR-EM relationship respectively. The regression results indicate that the coefficient for the interaction term between the degree of masculinity versus femininity and CSR (CSR*MAS) is positive, however insignificant. Both hypotheses 3b and 3c can therefore be rejected, among the data of this research there is no evidence to proof that a positive moderation exists.

Despite the non-significance of the coefficient of the interaction term, the results indicate that within countries that have a value of 59.903 on the masculinity-versus-femininity index a higher CSR performance is significantly negatively associated with less EM.

	AEM	REM
CSR	-0.000078**	-0.00065**
	(-1.98)	(-2.40)
MAS	0.00074***	0.0035***
	(5.64)	(2.72)
CSR*MAS	0.00000068	0.0000061
	(0.50)	(0.70)
GOV	-0.000095**	0.00018
	(-2.46)	(0.98)
LEV	0.00014***	0.00095***
	(3.06)	(2.64)
MBV	0.000020	0.000064
	(0.75)	(1.43)
ROA_{t-1}	-0.000017	-0.0027***
	(-0.16)	(-4.15)
Constant	-0.037***	-0.29**
	(-3.11)	(-2.37)
Year Dummies	Included	Included
Observations	4347	4347

Table 11. Random effects regression, testing the moderating effect of masculinity vs femininity on the CSR-EM relationship. Z-values are displayed in parentheses. Significance is displayed by asterisks where *=p<0.1; **=p<0.05; ***=p<0.01

Hypotheses 3d and 3e proposed that the degree of individualism positively moderates the effect of CSR performance on earnings management and that the degree of collectivism negatively moderates this relationship. As can be noted in the results that are projected in table 12, a significant positive moderating effect of the individualism versus collectivism-index (IDV) exists on the relationship between CSR and AEM (0.0000039; $p < 0.01$).

As mentioned in chapter 3, IDV is measured on a scale from 0 up until 100 with a score of 50 as the dividing point between collectivism and individualism. Where a score of 49 implies that the culture is characterized as collectivistic, however little, and a score of 1 indicates a very collectivistic culture. A score above 50 indicates an individualistic culture, where a higher score reflects a more individualistic culture. If the value for IDV increases it means either a decrease in collectivism or an increase in individualism and a decrease in the value for IDV means an increase in collectivism or a decrease in individualism. The positive moderating effect suggests that a higher value for IDV leads to a more positive effect of CSR performance on AEM and a lower value for IDV leads to a more negative effect of CSR on AEM. Based on the composition of the collectivism versus individualism index and the visible evidence in table 12, hypotheses 3d and 3e can be partially accepted. In sum, a decrease of IDV means an increase in the degree of collectivism and a more negative or less positive effect of CSR performance on AEM. Whereas an increase of IDV means an increase in the degree of individualism and a more positive or less negative effect of CSR performance on AEM. And thus it

can be concluded that the degree of collectivism negatively moderates the CSR-EM relationship and the degree of individualism positively moderates the CSR-EM relationship, if EM is measured as accrual-based earnings management.

In relation to real earnings management (REM), no significant moderating effect of the degree individualism and collectivism was found. Whereas for the direct effects of CSR on EM a significant negative relationship was found (-0.000076, $p < 0.1$; -0.00068, $p < 0.05$). Indicating that within countries that have a value of 64.354 for IDV, CSR has a negative significant effect on EM measured as both accrual based earnings management and real earnings management.

	AEM	REM
CSR	-0.000076*	-0.00068**
	(-1.94)	(-2.39)
IDV	-0.00054***	-0.0027***
	(5.47)	(-2.72)
CSR*IDV	0.0000039***	-0.0000046
	(2.76)	(0.40)
GOV	-0.000094**	0.00018
	(-2.44)	(0.96)
LEV	0.00014***	0.00095***
	(2.95)	(2.61)
MBV	0.000020	0.000063
	(0.75)	(1.43)
ROA$_{t-1}$	-0.000035	-0.0026***
	(-0.33)	(-4.22)
Constant	0.057***	0.17***
	(8.91)	(3.16)
Year Dummies	Included	Included
Observations	4347	4347

Table 12. Random effects regression, testing the moderating effect of individualism vs collectivism on the CSR-EM relationship. Z-values are displayed in parentheses. Significance is displayed by asterisks where *=p<0.1; **=p<0.05; ***=p<0.01

The final part of testing the moderating effects of informal institutional factors, consists of testing the moderating effect of uncertainty avoidance on the CSR-EM relationship. Following the reasoning that led to the composition of hypothesis 3f, a negative moderating effect of uncertainty avoidance is expected. The results of table 13 indicate that a significant moderation of uncertainty avoidance (CSR*UAI) has not been found among the data. It can therefore be concluded that hypothesis 3f can be rejected.

As far as the direct effects it can be concluded that a negative significant effect of CSR on AEM and REM exists within countries where the degree of uncertainty avoidance is 64.741. Analyzing

the control variables it can be noted that, in line with the previous regressions, leverage and lagged return on assets have a significant effect on earnings management. Besides leverage and lagged return on assets, the governance performance score again proves to have a significant effect on accrual based earnings management (AEM).

	AEM	REM
CSR	-0.000079**	-0.00065**
	(-1.97)	(-2.38)
UAI	0.00061***	0.0029***
	(5.58)	(2.73)
CSR*UAI	0.00000068	0.0000060
	(0.46)	(0.61)
GOV	-0.000096**	0.00018
	(-2.49)	(0.97)
LEV	0.00014***	0.00095***
	(3.06)	(2.64)
MBV	0.000020	0.000063
	(0.76)	(1.42)
ROA_{t-1}	-0.000015	-0.0027****
	(-0.14)	(-4.14)
Constant	-0.023**	-0.22**
	(-2.39)	(-2.29)
Year Dummies	Included	Included
Observations	4347	4347

Table 13. Random effects regression, testing the moderating effect of uncertainty avoidance on the CSR-EM relationship. Z-values are displayed in parentheses. Significance is displayed by asterisks where *=p<0.1; **=p<0.05; ***=p<0.01

4.4 Robustness Checks

Civil Law versus Common Law

In addition to the original regressions a robustness check is performed. Within the robustness check analysis, slight changes are made to the model and the results are compared to the results of the original regressions. As a robustness check a distinction is made between firms located in civil law countries and common law countries. Comparing the effects between firms in common law countries and civil law countries is of relevance as besides differences in institutional and cultural backgrounds, there are differences in the commitment to CSR practices in both types of countries (Sarra & Nakahigashi, 2012). Eweje & Sakaki (2015) name The United States as an example for a country with a common law jurisdiction and Japan as an example of a country with a civil law jurisdiction. Firms in common law countries can, without the influence of legislative intervention, form their own principles

and practices and therefore shape the law (Eweje & Sakaki, 2015). Whereas firms in civil law countries commit to certain practices to the extent that is covered by the legislation (Eweje & Sakaki, 2015). According to Fukukawa and Moon (2004) Japanese companies are seen as the basis of society and are viewed as members of society besides individuals, which is not in line with the Anglo-American model of society. Differences in the jurisdiction might lead to different results of the effects of formal and informal institutional factors on the CSR – EM relationship.

When analyzing the legal origins of a country a distinction can be made between countries that rely on a civil law system and countries that rely on a common law system. Common law countries are known for their strong protection of outside investors, whereas civil law systems experience stronger protection of the creditors of the firm (La Porta et al., 2000). Within common law countries, firms have less incentives to behave in a way that suits the interests of all stakeholders besides the shareholder, because the underlying legal framework strongly protects shareholders' interest (Benlemlih & Girerd-Potin, 2017). According to shareholder primacy theory, in which shareholder interest should be the first factor taken into account when developing corporate strategy, stakeholder well-being is achieved when shareholders' value is maximized (Benlemlih & Girerd-Potin, 2017). Within civil law countries firm's traditions are perceived to be more stakeholder-oriented (Matten & Moon, 2008). Firms operating within a civil law environment are more likely to act in a social responsible way than firms operating within a common law environment (Benlemlih & Girerd-Potin, 2017).

The common law – civil law distinction can be seen as the difference between countries being shareholder-oriented and countries being-stakeholder oriented. Countries that are shareholder-oriented perceive shareholders as the most important stakeholder and maximizing the value of the firm and thus shareholder value should be the main goal of the firm. A shareholder-oriented view may also perceive investments in CSR that favor the benefits of stakeholders other than the shareholder as inefficient and unnecessary. CSR practices of firms operating within stakeholder-oriented countries are perceived as valuable to society and are positively priced by financial market (Benlemlih & Girerd-Potin, 2017).

	Civil	Common
CSR performance is negatively related to EM	Negative significant	Insignificant
Investor Protection negatively moderates the CSR-EM relationship	Insignificant	Insignificant
The degree of Power Distance positively moderates the CSR-EM relationship	Insignificant	Insignificant

Masculinity positively moderates the CSR-EM relationship, Femininity negatively moderates the CSR-EM relationship	Insignificant	Insignificant
Individualism positively moderates the CSR-EM relationship, Collectivism negatively moderates the CSR-EM relationship	Positive significant	Negative significant
Uncertainty Avoidance negatively moderates the CSR-EM relationship	Positive Significant	Negative significant

A summary of the divided panel is portrayed in Appendix C, with the common law part of the dataset listed in the upper section of the table and the civil law part in the lower section of the table. It can be noticed that the average level of earnings management, measured as both AEM and REM, is higher for firms headquartered within civil law countries compared to firms headquartered within common law countries. This is contradictory to the expectations, as the fact that civil law countries often are more stakeholder oriented it was expected that firms headquartered in these countries would engage less in EM. As expected the mean CSR performance score is slightly higher within civil law countries than within common law countries, within the stakeholder-oriented countries firms tend to manage the operations in favor of all their stakeholders and society (Braam & Peeters, 2018). Looking at the institutional factors it can be concluded that, based on this sample, common law countries are on average: less power distant, masculine, uncertainty avoiding and more individualistic and above all better protect the minority shareholders.

To test the differences, the regressions that are run within section 2 of chapter 4 are run for the separate groups and the results are compared to each other. The tables with the regression results are shown within section C of the appendix. With regards to the fixed effects regression that tested the effect of CSR performance on EM, a significant negative effect was found between CSR performance and accrual based earnings management for firms headquartered within civil law countries. Reason for this could be that within this group of countries, the origins of CSR are more aimed at societal well-being and CSR performance is relatively more important compared to common law countries. As far as the interaction terms concerned, similar to the regressions of section 4.2, no significant moderating effects were found for IP, PDI and MAS were found within the separated regressions. For the degree of individualism versus collectivism significant moderations were found in both the common law group and the civil law group. In line with the results of the original regressions a positive moderating effect of IDV on the relationship between CSR and AEM for firms headquartered within civil law countries. Whereas within the common law group a negative moderating effect of IDV on the relationship between CSR performance and REM was found, which is contradictory to the reasoning in chapter two. This implies that within common law countries, a higher degree of

individualism or a lower degree of collectivism leads to a more negative effect of CSR on real earnings management.

Surprisingly, significant moderating effects of uncertainty avoidance (UAI) on the CSR-EM relationship after dividing the two groups of firms. Whereas no significant moderating effects for uncertainty avoidance were found within the original regression results that covered the full dataset. In line with the argumentation of chapter 2 that led to the composition of hypothesis 3f, a significant negative moderating effect for uncertainty avoidance was found on the relationship between CSR performance and REM for firms headquartered within common law countries. In contradiction to the argumentation, a significant positive moderating effect of uncertainty avoidance on the relationship between CSR and AEM was found for firms headquartered within civil law countries. Indicating that within civil law countries, a higher degree of uncertainty avoidance leads to a more positive effect of CSR performance on accrual based earnings management. Even though this finding is contradictory to the reasoning of the research, possible explanations for this finding exist. Managers within a culture that is characterized by a high degree of uncertainty avoidance, could use earnings management as a tool to cope with uncertainty (Geiger et al., 2006). By reporting the desired earnings, the possible uncertainty could be reduced (Geiger et al., 2006). Besides possibly causing managers and auditors to manipulate earnings, Williams and Zinkin (2008) state that within cultures with a high degree of uncertainty avoidance stakeholders are less likely to punish firms for irresponsible behaviors compared to a culture with a low degree of uncertainty avoidance. The reasoning of Williams and Zinkin (2008) holds that, within uncertainty avoiding cultures the responsible managers take the full blame by themselves if the firm operates irresponsible due to their decisions.

The control variables lagged return on assets (ROA$_{t-1}$) and leverage (LEV) prove to be significant predictors for engaging in EM for firms headquartered both in common law countries as well as civil law countries. As far as the other control variables concerned, somewhat surprisingly findings resulted from the separated regressions. The control variable that controls for size, market-to-book value (MBV), was insignificant within all regressions that covered the full sample. But after separating the sample, market-to-book value indicates to be a significant predictor for REM within the civil law countries. This indicates that for firms headquartered in civil law countries a higher market-to-book value leads to more real earnings management and could indicate that larger firms tend to manipulate earnings by means of REM.

Rule of Law

Comparing the results of firms headquartered in civil law countries and firms headquartered in common law countries has provided significance for cultural variables that did not prove to have a significant moderating effect in the original model. In order to run an additional robustness test for the

moderating effect of formal institutional factors, the strength of minority investor protection index (IP) is replaced by the rule of law index (ROL). The rule of law index indicates the quality of law enforcement, police, courts and rules of society etcetera. In line with Braam & Peeters (2018) and Kim et al. (2012), the rule of law index is used as a representative indicator for the quality of the institutional environment of a country. The data regarding the rule of law index is retrieved from Worldbank.

Aware of the fact that the value for the rule of law index varies over time, combined with the results of the Hausman-test and the Breusch-Pagan / Cook-Weisberg test, a fixed effects regression with robust standard errors was performed to test the moderating effect of the rule of law index. The regression results are provided in table C.5. of the appendix. After replacing the variable IP by the variable ROL, it can be obtained that there is a positive significant moderating effect of the rule of law index on the relationship between CSR Performance and accrual-based earnings management. Implying that a higher rule of law index value leads to a more positive effect of CSR performance on managing earnings through manipulation of the accruals. The positive moderating effect is contradictory to the reasoning of this research that led to the formulation of hypothesis 2 and expected a negative moderating effect of IP as a proxy for the strength of the institutional environment. A possible explanation for the positive moderation is provided by Jackson and Apostolakou (2010) as their reasoning implicates that more regulations provide less room to deviate from the proposed standards. According to Jackson and Apostolakou (2010), the minimalized room for deviation in highly regulated contexts causes less room for extensive CSR initiatives and minimizes the pressure of the stakeholders on the firm to behave more responsible than supposed to given that they comply with the existing regulations.

5. Conclusion and Discussion

This research aims to add to the body of knowledge that scrutinizes whether social responsible corporations also behave responsible in the reporting of their accounting numbers, and thus increase transparency and provide non-manipulated financial reports to outside investors. The existing knowledge has provided mixed results; Kim et al. (2012) found a negative association between CSR and EM, whereas Prior et al. (2008) found a positive association. By testing the moderating effects of institutional factors, measured as investor protection and Hofstede's cultural framework, this research provides new insights in the association between CSR performance and earnings management. The question that is central in this research is stated as: *"What are the effects of institutional factors and cultural factors on the relationship between Corporate Social Responsibility Performance and earnings management?"*

By means of three hypotheses and six sub-hypotheses, this research builds towards answering the research question. Based on the ethical, reputational and financial performance implications of CSR, mentioned by Kim et al. (2012), a negative association between CSR performance and EM was proposed. This negative association was tested by adopting the Kothari model (Kothari et al., 2005) as a proxy for accrual based earnings management (AEM), the Roychowdhury model (Roychowdhury, 2006) as a proxy for real earnings management (REM) and the Environmental and Social score to measure the CSR performance of a firm. The results of the regressions provided insignificant results for the association between CSR performance and both AEM and REM. Besides insignificant results for the direct relationship between CSR and earnings management, the results for possible moderating effects of investor protection, masculinity versus femininity and uncertainty avoidance were insignificant as well. The degree of power distance and the degree of individualism versus collectivism were found to have a negative and positive moderating effect on AEM respectively. The negative moderating effect of power distance is contradictory to the reasoning of this research, as it implies that a higher degree of power distance leads to more negative effect of CSR performance on accrual based earnings management. A possible partial explanation is provided by Goodwin, Goodwin, and Fiedler (2000), as the degree of power distance was found to have a significant effect on ethical decision-making processes within businesses. Goodwin et al. (2000) state, based on their findings, that people within high power distance countries consider power as appropriately distributed and are therefore less likely to engage in earnings management to portray their practices as better performing than other firms. Additional to the argumentation that led to the expected positive moderating effect of individualism, this effect can be explained by the fact that individualism affects the ethical judgement of an auditor (Geiger et al., 2006). According to Cohen et al. (1995), auditors within individualistic act more in self-interest and, therefore, perceive engaging in earnings management as a tool for individual gain and favor producing manipulated earnings over true earnings.

Besides the interaction effects, several control variables proved to be reliable predictors for predicting the manipulation of earnings. Namely, lagged return on assets and leverage proved that among the sample of this research financial malperformance provides incentives for manipulating the earnings among the sample of this research. In line with Kim et al. (2012) the governance performance score is a reliable predictor in predicting accrual based earnings management, as across multiple regressions a negative effect of governance score on AEM was found. An explanation for this could be that better governed firms have a higher quality board, more diversity and an independent audit committee of high quality which decreases the tendency of firms to engage in accrual-based earnings management (Bruynseels & Cardinaels, 2014).

After dividing the sample into two separate groups, firms headquartered within civil law countries and firms headquartered within common law countries, the results took a somewhat surprising turn. After not finding a significant association between CSR and EM across the full sample within the regression of chapter 4, a significant negative association between CSR performance and AEM was found for firms headquartered within civil law countries after dividing the sample. This implies that the ethical, reputational and financial reporting implications of CSR hold within civil law countries. And thus, firms invest in CSR practice as a result of managers intending to behave honest and ethical. Given that this negative association was found within the civil law countries, this association could be explained by the stakeholder orientation that dominates the thought within these countries. As within these countries, better performing CSR firms are more cautious than aggressive in reporting their earnings in order to operate in the best interests of all stakeholders and not just the shareholders.

This research has provided insights into the moderating effects of formal and informal institutional factors on the CSR-EM relationship and how these effects differ between civil law and common law countries. By including the institutional factors this research adds to the existing body of knowledge, as combining both formal institutional factors and informal (cultural) institutional factors as possible moderators on the CSR-EM relationship has not been considered yet. This research also provides practical insights for managers, as this research has proved that the existing cultural standards with regards to power distance and individualism influence the CSR-EM relationship. Managers therefore have to take these standards into account during a decision-making situation that influences either CSR or EM or both of them, as the impact of the decision can be affected by the cultural standards of the country of relevance.

5.1 Limitations

It must be acknowledged that this research contains several limitations, which causes the results to be flawed. At first the CSR performance score was measured by means of ESG-data from the ASSET-4 database, whereas prior knowledge often opted for measuring CSR performance through

the use of data from the KLD database (Waddock & Graves, 1997; Kim et al., 2012). The KLD database combines surveys, financial statements and press articles as well as academic articles to construct a CSR measure. KLD is well embedded within prior research and argued to be the most widely accepted measure for CSR performance and the standard for quantitative research to evaluate CSR performance (Mattingly and Berman, 2006; Chatterji et al., 2009; Waddock, 2003). The KLD database mainly covers US-firms and thus could not be applied to this research, therefore the ASSET-4 ESG data were applied to this research. Another overall limitation of CSR performance itself is, that measuring CSR performance is flawed due to the lack of a definition for CSR performance that is commonly accepted (Braam & Peeters, 2018; Hrasky, 2011).

Besides the CSR performance variable, Hofstede's (2010) culture dimensions contain flaws as well. These cultural indices are based on surveys among employees working for IBM across the world. This harms the generalizability of the results, as the respondent group of IBM employees might not be representative for a full country (Matthiesen & Salzmann, 2017).

A third limitation of this research is the application of random effects regressions to test the moderating effects of investor protection as well as the cultural factors on the relationship between CSR performance and EM. It is opted to use the random effects regressions as the moderating variables are stable over time and therefore the fixed effects regression would omit these moderating variables. Within the random effects model, explanatory variables can be correlated with the error term which leads to biased estimates of the explanatory variables (Wooldridge, 2012). Aside from the adoption of the random effects model, the sample size of 4347 observations could be considered to small to draw representative conclusions. Besides the small sample size, the sample is unbalanced and consists of unequal observations for each separate country. The inequality of the observations per country can be seen as a limitation, as based on the theory heterogeneity among the countries due to country-specific institutional factors was expected in this research. The results of testing the effects of these heterogeneous country-specific factors on an assumed homogeneous relationship (CSR-EM) among different countries, could provide an enhanced view on the relationship if the observations are equal per country.

5.2 Future Research

This research adds new insights into the effects of institutional factors on the CSR-EM relationship to the existing body of knowledge. By combining both formal and informal institutional factors as possible moderators, this research has shown that the degree of power distance and the degree of individualism versus collectivism prove to be significant moderators. Further research is needed to further scrutinize the moderating effects of institutional factors on the CSR-EM relationship. Future research could distinguish CSR into CSR used for opportunistic purposes or

transparent purposes and therefore provide a more precise explanation for the association between CSR and different forms of EM. Another suggestion for future research is that by providing a more in-depth analysis of the prevailing institutional context of countries, perhaps more precise predicting variables could be created that could affect the CSR-EM relationship. However culture is hard to quantify, therefore in-depth case studies of somewhat identical firms located within different countries could provide new insights or starting points for developing new measurements that illustrate the culture of a country.

References

Alsaadi, A., Jaafar, A., & Ebrahim, M. S. (2013, July). Corporate social responsibility, Shariah-compliant and earnings management. In *Seventh Asia Pacific Interdisciplinary Research in Accounting Conference* (Vol. 44, No. 0, pp. 1-45).

An, Z., Li, D., & Yu, J. (2016). Earnings management, capital structure, and the role of institutional environments. *Journal of Banking & Finance*, *68*, 131-152.

Aupperle, K.E., Carroll, A.B., and Hatfield J.B. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. *Academy of Management Journal,* 28, pp. 446-463

Benlemlih, M., & Girerd-Potin, I. (2017). Corporate social responsibility and firm financial risk reduction: On the moderating role of the legal environment. *Journal of Business Finance & Accounting*, *44*(7-8), 1137-1166.

Bhattacharya, U., Daouk, H., & Welker, M. (2003). The world price of earnings opacity. *The Accounting Review*, *78*(3), 641-678.

Bozzolan, S., Fabrizi, M., Mallin, C. A., & Michelon, G. (2015). Corporate social responsibility and earnings quality: International evidence. *The International Journal of Accounting*, *50*(4), 361-396.

Braam, G., Nandy, M., Weitzel, U., & Lodh, S. (2015). Accrual-based and real earnings management and political connections. *The International Journal of Accounting*, *50*(2), 111-141.

Braam, G., & Peeters, R. (2018). Corporate sustainability performance and assurance on sustainability reports: Diffusion of accounting practices in the realm of sustainable development. *Corporate Social Responsibility and Environmental Management*, *25*(2), 164-181.

Bruynseels, L., & Cardinaels, E. (2014). The audit committee: Management watchdog or personal friend of the CEO?. *The accounting review*, *89*(1), 113-145.

Buertey, S., Sun, E., Lee, J., & Hwang, J. (2020). Corporate social responsibility and earnings management: The moderating effect of corporate governance mechanisms. *Corporate Social Responsibility and Environmental Management, 27*(1), 256-271.

Bushman, R. M., Piotroski, J. D., & Smith, A. J. (2004). What determines corporate transparency?. *Journal of accounting research*, *42*(2), 207-252.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of management Review*, *32*(3), 946-967.

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of management review*, *4*(4), 497-505.

Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business horizons*, *34*(4), 39-48.

Chapple, W., & Moon, J. (2005). Corporate social responsibility (CSR) in Asia: A seven-country study of CSR web site reporting. *Business & society*, *44*(4), 415-441.

Chatterji, A. K., Levine, D. I., & Toffel, M. W. (2009). How well do social ratings actually measure corporate social responsibility?. *Journal of Economics & Management Strategy*, *18*(1), 125-169.

Chih, H. L., Shen, C. H., & Kang, F. C. (2008). Corporate social responsibility, investor protection, and earnings management: Some international evidence. *Journal of Business Ethics*, *79*(1-2), 179-198.

Cho, E., & Chun, S. (2016). Corporate social responsibility, real activities earnings management, and corporate governance: evidence from Korea. *Asia-Pacific Journal of Accounting & Economics*, *23*(4), 400-431.

Clarke, T. (2005). Accounting for Enron: Shareholder value and stakeholder interests. *Corporate Governance: An International Review, 13*(5), 598-612.

Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual-based earnings management in the pre-and post-Sarbanes-Oxley periods. *The accounting review*, *83*(3), 757-787.

Cohen, J. R., Pant, L. W., & Sharp, D. (1995). An international comparison of moral constructs underlying auditors' ethical judgments. *Research on Accounting Ethics*, *1*(2), 97-126.

Deakin, S., & Sarkar, P. (2008). Assessing the long-run economic impact of labour law systems: A theoretical reappraisal and analysis of new time series data. *Industrial Relations Journal*, *39*(6), 453-487.

DeFond, M., Hung, M., & Trezevant, R. (2007). Investor protection and the information content of annual earnings announcements: International evidence. *Journal of Accounting and Economics*, *43*(1), 37-67.

De Jong, E. (2011). Culture, institutions and economic growth. *Journal of Institutional Economics*, *7*(4), 523-527.

Eweje, G., & Sakaki, M. (2015). CSR in Japanese companies: Perspectives from managers. *Business Strategy and the Environment*, *24*(7), 678-687.

Fifka, M. S., & Pobizhan, M. (2014). An institutional approach to corporate social responsibility in Russia. *Journal of Cleaner Production*, *82*, 192-201.

Frost, C. A., & Pownall, G. (1994). Accounting disclosure practices in the United States and the United Kingdom. *Journal of Accounting Research*, *32*(1), 75-102.

Fukukawa, K., & Moon, J. (2004). A Japanese model of corporate social responsibility? A study of website reporting. *Journal of Corporate Citizenship*, (16), 45-59.

García-Sánchez, I. M., & García-Meca, E. (2017). CSR engagement and earnings quality in banks. The moderating role of institutional factors. *Corporate Social Responsibility and Environmental Management*, *24*(2), 145-158.

Geiger, M. A., O'Connell, B. T., Clikeman, P. M., Ochoa, E., Witkowski, K., & Basioudis, I. (2006). Perceptions of earnings management: The effects of national culture. *Advances in International Accounting*, *19*, 175-199.

Goodwin, J. D., Goodwin, D., & Fiedler, B. (2000). The influence of culture on accountants' ethical decision making in Singapore and Australia. *Accounting Research Journal*, *13*(2), 22-36.

Gray, S. J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, *24*(1), 1-15.

Grougiou, V., Leventis, S., Dedoulis, E., & Owusu-Ansah, S. (2014). Corporate social responsibility and earnings management in US banks. In *Accounting Forum* (Vol. 38, No. 3, pp. 155-169). Taylor & Francis.

Grow, B., Hamm, S., & Lee, L. (2005). The debate over doing good. *Business Week*, *3947*(August 15), 76.

Han, S., Kang, T., Salter, S., & Yoo, Y. K. (2010). A cross-country study on the effects of national culture on earnings management. *Journal of International Business Studies*, *41*(1), 123-141.

Haniffa, R. M., & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, *38*(3), 317-349.

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting horizons*, *13*(4), 365-383.

Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*, Sage, Beverly Hills, CA

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). Cultures and Organizations: Software of the Mind. Revised and expanded 3rd Edition. *N.-Y.: McGraw-Hill*.

Hoi, C. K., Wu, Q., & Zhang, H. (2013). Is corporate social responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. *The Accounting Review*, *88*(6), 2025-2059.

Hong, Y., & Andersen, M. L. (2011). The relationship between corporate social responsibility and earnings management: An exploratory study. *Journal of Business Ethics*, *104*(4), 461-471.

Hrasky, S. (2012). Carbon footprints and legitimation strategies: symbolism or action?. *Accounting, Auditing & Accountability Journal*.

Hu, Y., Chen, S., Shao, Y., & Gao, S. (2018). CSR and firm value: Evidence from China. *Sustainability*, *10*(12), 4597.

Idowu, S.O., Capaldi, N., Fifka, M.S., Zu, L., and Schmidpeter, R. (2015). Dictionary of Corporate Social Responsibility. Berlin: Springer

Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, *43*(9), 834-864.

Jackson, G., & Apostolakou, A. (2010). Corporate social responsibility in Western Europe: An institutional mirror or substitute?. *Journal of business ethics*, *94*(3), 371-394.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of accounting research*, *29*(2), 193-228.

Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of management review*, *20*(2), 404-437.

Jordaan, L. A., De Klerk, M., & de Villiers, C. J. (2018). Corporate social responsibility and earnings management of South African companies. *South African Journal of Economic and Management Sciences*, *21*(1), 1-13.

Jung, J., & Sharon, E. (2019). The volkswagen emissions scandal and its aftermath. *Global Business and Organizational Excellence, 38*(4), 6-15.

Khanna, T., Kogan, J., & Palepu, K. (2006). Globalization and similarities in corporate governance: A cross-country analysis. *Review of Economics and Statistics*, *88*(1), 69-90.

Kim, S. H., Udawatte, P., & Yin, J. (2019). The Effects of Corporate Social Responsibility on Real and Accrual-based Earnings Management: Evidence from China. *Australian Accounting Review*, *29*(3), 580-594.

Kim, Y., Park, M. S., & Wier, B. (2012). Is earnings quality associated with corporate social responsibility? *The accounting review*, *87*(3), 761-796.

Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of chiropractic medicine*, *15*(2), 155-163.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of accounting and economics*, *39*(1), 163-197.

Kumala, R., & Siregar, S. (2020). Corporate social responsibility, family ownership and earnings management: The case of indonesia. *Social Responsibility Journal, Ahead-of-print*(Ahead-of-print)

Kyaw, K., Olugbode, M., & Petracci, B. (2017). The role of the institutional framework in the relationship between earnings management and corporate social performance. *Corporate Social Responsibility and Environmental Management*, *24*(6), 543-554.

Lang, M., Raedy, J. S., & Wilson, W. (2006). Earnings management and cross listing: Are reconciled earnings comparable to US earnings?. *Journal of accounting and economics*, *42*(1-2), 255-283.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of financial economics*, *58*(1-2), 3-27.

Larson, C. R., Sloan, R., & Giedt, J. Z. (2018). Defining, measuring, and modeling accruals: a guide for researchers. *Review of Accounting Studies*, *23*(3), 827-871.

Lenssen, G., Perrini, F., Tencati, A., Lacy, P., Ringov, D., & Zollo, M. (2007). The impact of national culture on corporate social performance. *Corporate Governance: The international journal of business in society*.

Leuz, C., Nanda, D., & Wysocki, P. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics, 69*(3), 505-527.

Liang, H., & Renneboog, L. (2017). On the foundations of corporate social responsibility. *The Journal of Finance*, *72*(2), 853-910.

Lowe, A., & Locke, J. (2006). Constructing an 'efficient frontier' of accounting journal quality. *The British Accounting Review*, *38*(3), 321-341.

Malik, M. (2015). Value-enhancing capabilities of CSR: A brief review of contemporary literature. *Journal of Business Ethics*, *127*(2), 419-438.

Marsat, S., and Williams, B. (2014). Does the Market Value Social Pillar? *Clermont Université*, pp. 1-21

Martínez-Ferrero, J., Banerjee, S., & García-Sánchez, I. (2016). Corporate social responsibility as a strategic shield against costs of earnings management practices. *Journal of Business Ethics, 133*(2), 305-324.

Matten, D., & Moon, J. (2008). "Implicit" and "explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of management Review*, *33*(2), 404-424.

Matthiesen, M. L., & Salzmann, A. J. (2017). Corporate social responsibility and firms' cost of equity: how does culture matter?. *Cross Cultural & Strategic Management*.

Mattingly, J. E., & Berman, S. L. (2006). Measurement of corporate social action: Discovering taxonomy in the Kinder Lydenburg Domini ratings data. *Business & Society*, *45*(1), 20-46.

McWilliams, A., Siegel, D., and Wright, P.M. (2006). Corporate social responsibility: strategic implications. *Journal of Management Studies,* 43, pp. 1-18

Money, K., & Schepers, H. (2007). Are CSR and corporate governance converging?: A view from boardroom directors and company secretaries in FTSE100 companies in the UK. *Journal of General Management*, *33*(2), 1-11.

Moratis, L., & van Egmond, M. (2018). Concealing social responsibility? Investigating the relationship between CSR, earnings management and the effect of industry through quantitative analysis. *International Journal of Corporate Social Responsibility*, *3*(1), 8.

Ni, X. (2020). Does stakeholder orientation matter for earnings management: Evidence from non-shareholder constituency statutes. *Journal of Corporate Finance*, 101606.

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge university press.

Paredes, A. A. P., & Wheatley, C. (2017). The influence of culture on real earnings management. *International Journal of Emerging Markets*.

Parsa, S., Tang, G., & Dai, N. (2016). How do Chinese businesses view corporate social responsibility?.

Porter, M.E., and Kramer, M.R. (2006). Strategy and society: the link between competitive advantage and corporate social responsibility. *Harvard Business Review,* 84, pp. 78-92

Prior, D., Surroca, J., & Tribó, J. A. (2008). Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility. *corporate governance: An international review*, *16*(3), 160-177.

Putra, A. M., Pagalung, G., & Habbe, A. H. (2018). Culture and corruption-driven agency costs and earnings management: evidence from south east Asian countries. *Intangible Capital*, *14*(4), 499-517.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, *42*(3), 335-370.

Salewski, M., & Zülch, H. (2014). The Association between corporate social responsibility (CSR) and earnings quality–evidence from European blue chips. *Working Paper, Leipzig Graduate School of Management*

Sarra, J., & Nakahigashi, M. (2012). Kigyo no shakai-teki sekinin: Challenges for corporate social responsibility in Japan. *UBCL Rev.*, *45*, 779.

Scholtens, B., & Kang, F. C. (2013). Corporate social responsibility and earnings management: Evidence from Asian economies. *Corporate Social Responsibility and Environmental Management*, *20*(2), 95-112.

Shafer, W. E., Fukukawa, K., & Lee, G. M. (2007). Values and the perceived importance of ethics and social responsibility: The US versus China. *Journal of Business Ethics*, *70*(3), 265-284.

Shultz, J., Walsh, L., Garfin, D., Wilson, F., & Neria, Y. (2015). The 2010 deepwater horizon oil spill: The trauma signature of an ecological disaster. *The Journal of Behavioral Health Services & Research : Official Publication of the National Council for Community Behavioral Healthcare, 42*(1), 58-76.

Studenmund, A.H. (2016). A Practical Guide to Using Econometrics. *Pearson Education Limited,* 7th edition.

Waddock, S. (2003). Stakeholder performance implications of corporate responsibility. *International Journal of Business Performance Management*, *5*(2-3), 114-124.

Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic management journal*, *18*(4), 303-319.

Waldman, D. A., De Luque, M. S., Washburn, N., House, R. J., Adetoun, B., Barrasa, A., ... & Dorfman, P. (2006). Cultural and leadership predictors of corporate social responsibility values of top management: A GLOBE study of 15 countries. *Journal of International Business Studies*, *37*(6), 823-837.

Wijayana, S., & Gray, S. J. (2019). Institutional factors and earnings management in the Asia-Pacific: Is IFRS adoption making a difference?. *Management International Review*, *59*(2), 307-334.

Williams, G., & Zinkin, J. (2008). The effect of culture on consumers' willingness to punish irresponsible corporate behaviour: applying Hofstede's typology to the punishment aspect of corporate social responsibility. *Business Ethics: A European Review*, *17*(2), 210-226.

Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, *38*(3), 595-613.

Wooldridge, J. M. (2012). Introductory Econometrics: A Modern Approach, (Boston: Cengage Learning).

Yip, E., Van Staden, C., & Cahan, S. (2011). Corporate social responsibility reporting and earnings management: The role of political costs. *Australasian Accounting, Business and Finance Journal*, *5*(3), 17-34.

Appendix A

Table 1. Top 20 ranked accounting journals according to Lowe and Locke (2006). Australian survey

1.	Accounting, Organisations and Society	AOS
2.	The Accounting Review	TAR
3.	Contemporary Accounting Research	CAR
4.	Management Accounting Research	MAR
5.	Journal of Accounting Research	JAR
6.	Critical Perspectives on Accounting	CPA
7.	Accounting, Auditing and Accountability Journal	AAAJ
8.	Journal of Management Accounting Research	JMAR
9.	Abacus	Abacus
10.	Journal of Accounting and Economics	JAE
11.	Journal of Business Finance and Accounting	JBFA
12.	Journal of Accounting and Public Policy	JAPP
13.	Accounting and Business Research	ABR
14.	The British Accounting Review	BAR
15.	Auditing: A Journal of Practice and Theory	A: AJPT
16.	Accounting and Finance	A&F
17.	Accounting Horizons	A horizons
18.	Financial Accountability and Management	FAM
19.	Journal of Accounting Literature	JAlit
20.	The International Journal of Accounting	IJA

Table 2. Top 20 ranked accounting journals according to Lowe and Locke (2006). British survey

1.	Accounting, Organisations and Society	AOS
2.	The Accounting Review	TAR
3.	Journal of Accounting Research	JAR
4.	Journal of Accounting and Economics	JAE
5.	Contemporary Accounting Research	CAR
6.	Auditing: A Journal of Practice and Theory	A:AJPT
7.	Accounting and Business Research	ABR
8.	Journal of Business Finance and Accounting	JBFA
9.	Accounting, Auditing and Accountability Journal	AAAJ
10.	Journal of Management Accounting Research	JMAR
11.	Management Accounting Research	MAR
12.	Review of Accounting Studies	RAS
13.	Journal of Accounting and Public Policy	JAPP
14.	Critical Perspectives on Accounting	CPA
15.	Journal of Accounting Literature	JAlit
16.	Behavioral Research in Accounting	BRA
17.	Accounting Business and Financial History	ABFH
18.	Journal of International Financial Management & Accounting	JIFMA
19.	Abacus	Abacus
20.	Financial Accountability and Management	FAM

PHILANTHROPIC
Responsibilities

Be a good corporate citizen.
Contribute resources
to the community;
improve quality of life.

ETHICAL
Responsibilities

Be ethical.
Obligation to do what is right, just,
and fair. Avoid harm.

LEGAL
Responsibilities

Obey the law.
Law is society's codification of right and wrong.
Play by the rules of the game.

ECONOMIC
Responsibilities

Be profitable.
The foundation upon which all others rest.
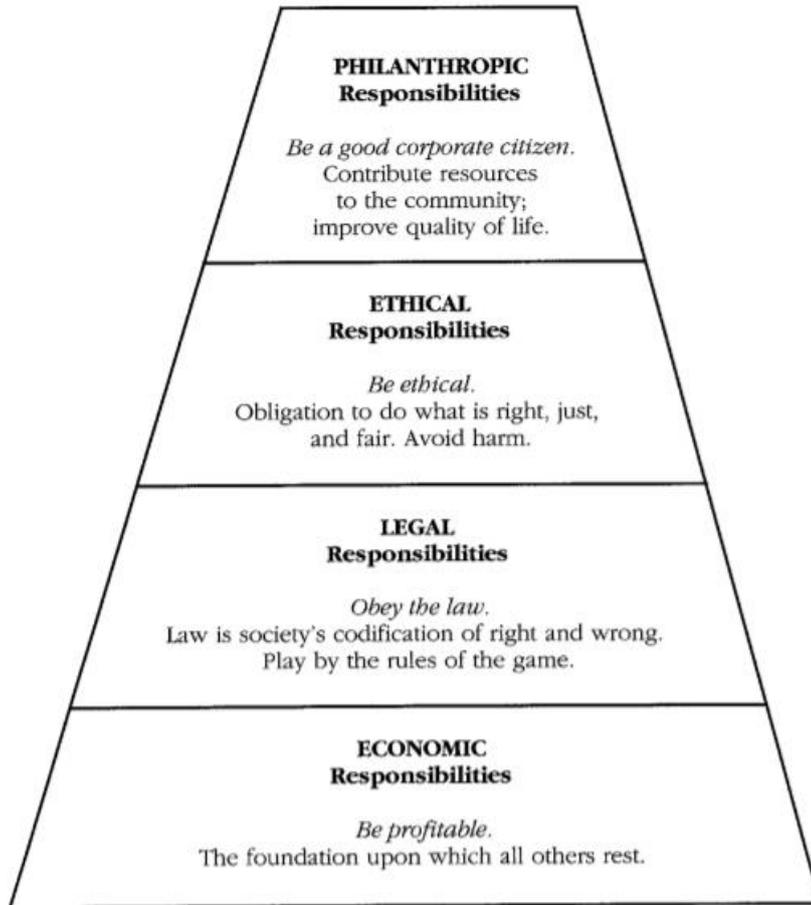
Pyramid of Corporate Social Responsibility (Carroll, 1991, p.42)

Appendix B

Variance Inflation Factor test

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
         idv |      2.90    0.344777
         pdi |      2.86    0.349041
         uai |      1.78    0.561725
         CSR |      1.52    0.659070
          IP |      1.49    0.673245
         mas |      1.36    0.736510
         GOV |      1.34    0.745057
  lagged_ROA |      1.11    0.902273
         LEV |      1.07    0.934037
         MBV |      1.00    0.997125
-------------+----------------------
    Mean VIF |      1.64
```

Intraclass Correlation Coefficient AEM

```
Conditional intraclass correlation
```

	Level	ICC	Std. Err.	[95% Conf. Interval]	
	ISOC	.002613	.0028217	.0003137	.0214036

Intraclass Correlation Coefficient REM

```
Conditional intraclass correlation
```

	Level	ICC	Std. Err.	[95% Conf. Interval]	
	ISOC	.0761496	.0353023	.0299051	.1805931

Appendix C

Descriptive statistics of firms headquartered in common law countries (displayed in the upper part of the table) and civil law countries (displayed in the lower part of the table).

Variable	Obs	Mean	Std. Dev.	Min	Max
AEM	1395	-.006	.04	-.229	.187
REM	1395	-.025	.226	-.885	1.011
CSR	1395	51.819	23.148	3.275	96.665
IP	1395	38.626	3.524	32	43
pdi	1395	39.387	7.244	22	68
mas	1395	61.626	4.32	52	66
idv	1395	85.394	14.545	25	91
uai	1395	42.387	6.473	29	51
GOV	1395	62.204	21.344	4.81	98.65
LEV	1395	22.801	14.721	0	87.56
MBV	1395	1.43	53.774	-1433.75	229.98
lagged_ROA	1395	8.219	9.678	-53.22	66.95

Variable	Obs	Mean	Std. Dev.	Min	Max
AEM	2952	0	.045	-.417	.44
REM	2952	.012	.202	-1.778	.901
CSR	2952	54.719	24.069	4.846	97.435
IP	2952	31.945	2.335	28	37
pdi	2952	56.235	15.704	31	93
mas	2952	65.643	28.409	5	95
idv	2952	47.857	17.897	18	80
uai	2952	75.305	22.03	29	95
GOV	2952	57.117	21.698	1.26	98.4
LEV	2952	24.537	15.965	0	132.3
MBV	2952	2.534	26.378	-81.37	1404.81
lagged_ROA	2952	4.919	5.779	-32.49	53.58

Overview of the different countries that are used to construct the sample of this research

Country	Law System
Australia	Common Law
Brazil	Civil Law
Canada	Common Law
China	Civil Law
Japan	Civil Law
France	Civil Law
Germany	Civil Law
Hong Kong	Common Law
Italy	Civil Law
Netherlands	Civil Law
New Zealand	Common Law
Russia	Civil Law
South Korea	Civil Law
Sweden	Civil Law
United Kingdom (UK)	Common Law
United States (US)	Common Law

	AEM	REM	AEM	REM	AEM	REM
CSR	0.000087	-0.00097	0.000057	-0.0017*	-0.000087	-0.00047
	(0.53)	(-1.53)	(0.59)	(-1.81)	(-0.43)	(-0.81)
GOV	-0.000068	0.00064*	-0.00015**	0.00065*	-0.00016*	0.00061*
	(-0.61)	(1.77)	(-2.01)	(1.74)	(-2.06)	(1.68)
LEV	0.00016	0.0015**	0.000058	0.0015**	0.000050	0.0015**
	(1.09)	(2.35)	(0.69)	(2.49)	(0.60)	(2.49)
MBV	0.000020	0.000040	0.000027	0.000043	0.000027	0.000045
	(0.42)	(0.62)	(0.63)	(0.71)	(0.64)	(0.69)
lagged_ROA	-0.00027	-0.0034***	-0.00024**	-0.0034***	-0.00025**	-0.0034***
	(-1.56)	(-3.73)	(-2.01)	(-4.02)	(-2.04)	(-3.96)
IP			0.0076	-0.49*		
			(0.28)	(-1.90)		
int_CIP			-0.0000065	0.00018		
			(-0.37)	(1.29)		
pdi					0.00031	-0.0030**
					(1.06)	(-2.17)
int_CPDI					-0.000011	0.000052
					(-0.61)	(1.61)
Observations	1395	1395	1395	1395	1395	1395

Appendix C.1.: Regression results firms headquartered in common law countries

	AEM	REM	AEM	REM	AEM	REM
CSR	0.000090	-0.00091	-0.00012	-0.00015	0.000025	-0.0040**
	(1.00)	(-1.28)	(-0.50)	(-0.29)	(0.09)	(-2.50)
mas	0.000032	-0.0014*				
	(0.31)	(-1.64)				
int_CMAS	0.000021	0.0000081				
	(1.49)	(0.07)				
GOV	-0.00015**	0.00059	-0.00016**	0.00065*	-0.00015**	0.00067*
	(-1.97)	(1.63)	(-2.09)	(1.76)	(-1.98)	(1.84)
LEV	0.000047	0.0015**	0.000045	0.0016**	0.000059	0.0015**
	(0.56)	(2.41)	(0.54)	(2.55)	(0.70)	(2.50)
MBV	0.000027	0.000047	0.000027	0.000043	0.000027	0.000044
	(0.63)	(0.72)	(0.63)	(0.68)	(0.63)	(0.72)
lagged_ROA	-0.00025**	-0.0034***	-0.00025**	-0.0033***	-0.00024**	-0.0033***
	(-2.09)	(-3.97)	(-2.06)	(-3.98)	(-2.00)	(-3.98)
idv			0.00015	-0.0015***		
			(1.04)	(-2.59)		
int_CIDV			0.0000056	-0.000038**		
			(0.72)	(-2.31)		
uai					0.00010	0.0013
					(0.35)	(0.76)
int_CUAI					-0.00000022	-0.00013**
					(-0.02)	(-2.30)
Observations	1395	1395	1395	1395	1395	1395

Appendix C.2.: Regression results firms headquartered in common law countries

	AEM	REM	AEM	REM	AEM	REM
CSR	-0.00016*	-0.00020	-0.00011	-0.00067	-0.00011**	-0.00034
	(-1.87)	(-0.64)	(-1.96)	(-1.42)	(-2.23)	(-1.20)
GOV	-0.00012	0.00011	-0.000059	-0.0000096	-0.000059	-0.0000081
	(-1.52)	(0.54)	(-1.34)	(-0.05)	(-1.36)	(-0.04)
LEV	0.00040***	0.00080	0.00018***	0.00080	0.00018***	0.00083*
	(2.92)	(1.30)	(2.99)	(1.59)	(3.00)	(1.68)
MBV	0.000018***	0.00010***	0.0000023	0.00010***	0.0000022	0.00010***
	(3.76)	(7.17)	(0.68)	(5.66)	(0.64)	(5.84)
lagged_ROA	0.00068***	-0.0013	0.00028	-0.0016*	0.00028	-0.0016*
	(3.03)	(-1.45)	(1.58)	(-1.73)	(1.52)	(-1.70)
IP			0.00112***	0.00198**		
			(7.60)	(2.05)		
int_CIP			-0.0000081	-0.000085		
			(0.43)	(-0.62)		
pdi					0.00067***	0.00086*
					(8.44)	(1.93)
int_CPDI					-0.0000042	-0.000019
					(-1.58)	(-1.22)
Observations	2952	2952	2952	2952	2952	2952

Appendix C.3.: Regression results firms headquartered in civil law countries

	AEM	REM	AEM	REM	AEM	REM
CSR	-0.00013***	-0.00047	-0.000056	-0.000067	-0.00018***	-0.00051*
	(-2.80)	(-1.62)	(-0.99)	(-0.22)	(-3.42)	(-1.66)
mas	0.00039***	0.00058				
	(8.37)	(1.20)				
int_CMAS	0.00000085	0.0000034				
	(0.61)	(0.39)				
GOV	-0.000058	0.0000012	-0.000058	-0.000017	-0.000057	0.0000029
	(-1.32)	(0.01)	(-1.34)	(-0.08)	(-1.31)	(0.01)
LEV	0.00018***	0.00081	0.00019***	0.00082*	0.00018***	0.00081*
	(3.03)	(1.62)	(3.09)	(1.67)	(3.00)	(1.62)
MBV	0.0000022	0.00010***	0.0000021	0.00010***	0.0000028	0.00010***
	(0.64)	(5.71)	(0.62)	(5.74)	(0.83)	(5.62)
lagged_ROA	0.00029	-0.0016*	0.00028	-0.0016*	0.00031*	-0.0016*
	(1.60)	(-1.73)	(1.53)	(1.74)	(1.74)	(-1.73)
idv			0.00072***	-0.0033**		
			(7.46)	(-2.84)		
int_CIDV			0.0000050**	0.000025		
			(2.02)	(1.61)		
uai					0.00044***	0.00060**
					(8.49)	(2.13)
int_CUAI					0.0000048**	0.0000055
					(2.42)	(0.48)
Observations	2952	2952	2952	2952	2952	2952

Appendix C.4.: Regression results firms headquartered in civil law countries

	AEM	REM
CSR	-0.000078	-0.00053*
	(-1.00)	(-1.67)
ROL	0.011	0.039
	(1.24)	(1.14)
CSR*ROL	0.00019**	0.000029
	(2.27)	(0.08)
GOV	-0.000098	0.00028
	(-1.54)	(1.50)
LEV	0.00032***	0.0010**
	(3.19)	(2.48)
MBV	0.000018	0.000061
	(0.58)	(1.32)
ROA$_{t-1}$	0.00012	-0.0025***
	(0.82)	(-3.92)
Constant	-0.015	-0.052
	(0.01)	(0.04)
Year Dummies	Included	Included
Observations	4347	4347

*Appendix C.5.: Regression results testing the moderating effects of the Rule of Law index (ROL), interaction term CSR*ROL indicates moderating effect of ROL on the CSR-EM relationship.*

Appendix D

Composition of ESG scores. (Source: ASSET-4)

Pillar	Category	Indicators in Ratings	Weights
Environmental	Resource Use	20	11%
	Emissions	22	12%
	Innovation	19	11%
Social	Workforce	29	16%
	Human Rights	8	4.50%
	Community	14	8%
	Product Responsibility	12	7%
Governance	Management	34	19%
	Shareholders	12	7%
	CSR Strategy	8	4.50%
TOTAL		178	100%