Tax avoidance, value creation and CSR – a European perspective

Dirk Kiesewetter and Johannes Manthey

Abstract

Purpose – *This paper aims to answer how corporate governance and corporate social responsibility ("CSR") affect the relationship between value creation and tax avoidance. This study further analyses the impact of the institutional environment, i.e. whether a country is rather a liberal or a coordinated market economy, on the relationship between CSR and tax avoidance.*

Design/methodology/approach – *The empirical analysis comprises a panel data set of 7,924 observations for the years from 2005 to 2014 for European companies. The relationship between value creation and tax avoidance is tested by grouping the sample in high and low CSR performers. Similarly, the impact of the type of market economy is analysed for the firms.*

Findings – *The research design does not find evidence that tax avoidance is creating value. The empirical findings reveal that there is a positive relationship between value creation and the effective tax rate for firms with low social and environmental characteristics. Further, this analysis could show that stronger corporate governance is associated with a lower effective tax rate in both coordinated and liberal market economies. The analysis identifies social strengths being associated with a higher effective tax rate for coordinated market economies.*

Practical implications – *It is proposed to encourage CSR disclosure. The creation of incentives for social strengths could increase tax revenue. Firms should reconsider whether the engagement in tax avoidance is worth it and pursue social responsibility to achieve higher value creation for their stakeholders.*

Originality/value – *The paper challenges the intuitive expectation that tax avoidance creates value. It is suggested that the governance and CSR culture, as well as the tax legislation in Europe, is different to the USA. Conclusively, tax avoidance is not generating value for the European sample.*

Keywords *CSR, Corporate governance, Agency costs, Tax, Value creation, Tax avoidance*

Paper type *Research paper*

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1. Introduction

The relationship between tax avoidance and corporate governance, as well as corporate social responsibility (CSR), is analysed in a variety of papers conducting research on samples of Anglo-Saxon countries, in particular the USA. There is little empirical evidence of the relation for European companies. The aim of this paper is to understand the influence of corporate governance and CSR on tax avoidance for European companies. Further, the analysis attempts to clarify whether value is created by the engagement in tax avoidance. This paper picks up the findings of the tax avoidance literature on corporate governance, and subsequently extends the scope to CSR. The study aims to challenge the proposition that the agency framework largely used as an explanation of tax avoidance can be transferred to European companies. There are differences in the corporate governance cultures between Europe and the USA (Shleifer and Vishny, 1997). These differences put the transferability of the agency concept to European companies into question.

Recent papers established the relationship of corporate governance and tax avoidance and propose that tax avoidance reduces the tax burden for firms with superior corporate governance. The literature on corporate governance finds that tax management is

JEL classification – H20, H25, H26, M41, M48

Received 11 August 2016
Revised 31 May 2017
Accepted 4 July 2017

The authors are grateful for helpful comments by Martin Fochmann (Universitaet zu Koeln, Cologne), Jochen Hundsdoerfer (Freie Universitaet, Berlin), Rainer Niemann (Karl-Franzens-Universitaet, Graz) and other participants received at the Arqus conference in Munich 2016. We also thank the comments by Sven Hoerner and Jacob Justus Leidner, both from the University of Wuerzburg. The funding provided by the University of Wuerzburg is gratefully acknowledged.

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associated with agency costs and reporting costs (Desai and Dharmapala, 2006). There is evidence that corporate governance is a major determinant of value creation and destruction (Desai and Dharmapala, 2009). The literature on CSR leads to the conclusion that there is a positive relationship between CSR and tax avoidance (Lanis and Richardson, 2012). The finding that higher CSR is associated with a lower effective tax rate was confirmed by other studies in the subsequent years (Davis *et al.*, 2016). These findings support the view that companies are pointing at their social responsibility on the one hand, but on the other hand, engage in tax avoidance strategies (Sikka, 2010). There appear to be complex relations and conditions whether tax avoidance strategies generate value.

This paper distinguishes itself from other studies by investigating the relationship between tax avoidance and value creation by grouping a sample of European companies in high and low CSR performers. Subsequently, the determinants of CSR and tax avoidance are examined by grouping the sample based on whether a country is a liberal or a coordinated market economy, as suggested by Jackson and Apostolakou (2010). Thereby, the influence of the countries' institutional characteristics is analysed. To the best knowledge, no paper analysed the influence of tax avoidance and value creation with respect to CSR and the type of economy. The analysis extends the existing research developed in the USA to European companies and questions whether the agency framework, as an explanation for tax avoidance, can be applied to European companies.

The sample for the empirical analysis comprises 7,924 observations for European companies from 20 countries. In summary, the analysis shows that tax avoidance is not creating value. Throughout, the coefficients indicate a positive association. The relation between the effective tax rate and value creation is positive and highly significant for the low levels of environmental and social performance. Corporate governance cannot explain whether tax avoidance creates value for European companies. The study finds that the agency concept does not serve as a good explanation of tax avoidance for the European sample. However, CSR does have an influence on the tax avoidance behaviour. Firms with weak social and environmental characteristics showed a higher effective tax rate. Further, there was no evidence found for value creation by the engagement in tax avoidance. The analysis reveals that a higher effective tax rate is associated with higher value creation. The agency theory based argumentation by Desai and Dharmapala (2009), suggesting that strong governance can mitigate agency costs associated with tax avoidance, could not be confirmed for the European sample. Neither do the findings confirm the "corporate hypocrisy" argument by Sikka (2010).

Furthermore, the analysis could show that the corporate governance score has significant explanatory power of the effective tax rate. The relation is negative for both the coordinated and liberal market economies. The effect is stronger for firms in liberal market economies. This may result from differences in the corporate governance circumstances of companies in the two types of economies. The social score is positively associated with the effective tax rate only for the coordinated market economies. Possibly, the social score plays a stronger role and mirrors the internal affairs which extend to tax management as well.

This paper concludes that firms should reconsider their tax management activities. There is no evidence that tax avoidance creates value. The "success" of tax avoidance does not depend on corporate governance and CSR either. The agency concept, suggesting that tax avoidance is creating value for firms with superior corporate governance, could not be confirmed for the European sample. Within Europe, the type of economy has an influence on the corporate governance culture and also on the effective tax rate. This study could not explain why firms engage in tax avoidance even though it is not creating value for the European companies. This research attempts to clarify whether the European tax system is "tax avoidance proof" or the costs of tax avoidance outweigh the benefits.

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2. Background on CSR, corporate governance and tax avoidance

2.1 The relation of corporate governance, value creation and tax avoidance

The traditional view of tax avoidance suggests that it lowers tax payments, leads to higher earnings, and thus creates value for the shareholders. This argument is supported by studies based on valuation models (Wahab and Holland, 2012). These argue corporate tax avoidance is a value transfer from the state to the shareholders (Desai and Dharmapala, 2009).

The paper of Desai and Dharmapala (2006) is one of the first papers that analyses the association of corporate governance and tax avoidance for listed companies in the USA. There appears to be a positive relation between tax avoidance and managerial diversion (Desai and Dharmapala, 2006). The argumentation claims that tax avoidance reduces transparency, and thereby increases the risk of the management taking advantage at the cost of the resources of the company. Thus, firm value is negatively affected in case of weak corporate governance, which, in turn, could allow managers to understate earnings (Desai and Dharmapala, 2006). Desai and Dharmapala (2009) find that tax avoidance is value enhancing under the condition that firms have superior corporate governance characteristics. The papers of Desai and Dharmapala (2006, 2009) contributed to the research by suggesting an alternative approach to the question whether tax avoidance enhances value. This paper was the basis for a variety of studies analysing whether tax avoidance creates value for companies in the USA. Little is known whether the relation is transferable to Europe, and there are papers which showed this is not necessarily the case (Wahab and Holland, 2012).

Following a similar argumentation, the paper by Hasan *et al.* (2014) argues that good corporate governance can mitigate agency conflicts such as managerial rent diversion. Also, Hanlon and Slemrod (2009) find a negative reaction of the share price on news in the context of tax shelters. The analysis introduced a governance measure and found evidence for a significant interdependence between the quality of governance and the stock market reaction (Hanlon and Slemrod, 2009). The researchers suppose that well-governed firms may book the tax saving once it is audited, while poorly governed firms book the saving in the year it is realised (Hanlon and Slemrod, 2009). This shows the far-reaching and entangled nature of the causes and effects of tax avoidance and tax accounting.

A study by Wilson (2009) developed a framework to identify firms that are active in tax sheltering, finding a relation between larger book-tax differences and more aggressive financial reporting practices. Remarkably, Wilson (2009) finds positive abnormal returns for well-governed firms engaging in active tax sheltering. The opposite holds for firms with poor corporate governance (Wilson, 2009). The positive abnormal returns for firms with strong governance may result either from tax sheltering itself or corporate governance strengths cause superior incentives, leading to managers acting in the interest of the shareholders (Wilson, 2009).

In a study by Minnick and Noga (2010) focused on the long-run tax management, the relationship between corporate governance and tax avoidance of US corporations is examined. Similar to the previous research, corporate governance, in particular incentive systems, is seen as a major determinant of tax avoidance. The researchers found evidence that incentive compensation encourages long-term investments such as tax management (Minnick and Noga, 2010).

Wahab and Holland (2012) find a negative relation between firm value and tax planning for UK companies. The researchers follow the agency theory, arguing that information asymmetries can lead to managers acting in their own interest (Wahab and Holland, 2012). In contrast to the US research, Wahab and Holland (2012) do not find evidence that agency costs are moderated by corporate governance for firms in the UK. Wahab and Holland

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(2012) suppose inefficiencies of the UK corporate governance systems or insufficient information regarding taxation for control mechanisms.

Rego and Wilson (2012) suppose that equity risk incentives influence corporate tax aggressiveness. The analysis finds evidence for the hypothesis that the engagement in tax avoidance is a risk factor that generates benefits for the shareholders (Rego and Wilson, 2012). The reasoning is similar for managers engaging in risky investment opportunities. Equity risk incentives are used as a proxy for corporate governance. The empirical model finds a positive correlation between tax risk and stock return volatility, as well as executive equity risk incentives (Rego and Wilson, 2012). The degree of tax avoidance is measured by discretionary book-tax differences, tax shelter prediction scores and effective cash tax rates (Rego and Wilson, 2012). Rego and Wilson (2012) suggest that tax avoidance is risky and associated with costs. Thus, managers need to be incentivised to engage in tax avoidance that yields benefits to the shareholders. Rego and Wilson (2012) conclude that equity risk incentives create risk and significantly determine tax avoidance.

Armstrong *et al.* (2015) could not find evidence for a relation between corporate governance mechanisms and moderate levels of tax avoidance for US companies. However, the researchers do find a positive relation between board independence and financial sophistication for low levels of tax avoidance, in contrast to a negative relation for high levels of tax avoidance (Armstrong *et al.*, 2015). Armstrong *et al.* (2015) argue that tax avoidance and manager compensation only have a strong negative relation for high levels of tax avoidance, so superior corporate governance alleviates overinvestment for elevated levels of tax avoidance. Armstrong *et al.* (2015) conclude that there is a positive relationship between risk-taking equity incentives and high levels of tax avoidance. This could lead to overinvestment. In contrast, there is evidence for a negative relation between tax avoidance and board financial sophistication, as well as independence, which could antagonise agency conflicts (Armstrong *et al.*, 2015).

The literature above leads to the conclusion that tax avoidance is risky and not necessarily creating value. There is evidence that the latter tends to depend on firms' corporate governance strengths. This is the basis for the subsequent empirical analysis, which attempts to apply the knowledge developed in the USA to a European sample.

The literature above raises the following questions:

Q1. Does tax avoidance create value for European companies?

Is there an influence of corporate governance on the relationship between tax avoidance and value creation for European companies? These questions translate in the following hypothesis:

H1. Corporate governance has an influence on the relationship between tax avoidance and value creation.

2.2 The relation of CSR and tax avoidance

The paper of Sikka (2010) criticises the contradiction of making promises regarding social responsibility and ethical conduct on the one hand, and the engagement in tax avoidance and evasion on the contrary. According to Sikka (2010), the problems originate from the lack of disclosure of information on tax issues in the financial reporting. The topic of tax avoidance is sensitive and causes the feelings of anger and injustice, amongst other reasons because the expertise and availability of tax management options are available only to wealthy individuals and multinational corporations (Russell and Brock, 2016). The ethical consideration of tax avoidance relies on normative theories of ethics (Preuss, 2012). This paper attempts to measures the relationship between CSR and tax avoidance, but restrains from making further judgements on the legitimacy of tax management. Nonetheless, the critical aspects of tax avoidance are acknowledged, as it seems clear that tax revenue is of enormous importance for the government and society. Tax revenue is an

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essential part of the functioning of the government and society, and therefore, Bird and Davis-Nozemack (2016) regard tax avoidance as a sustainability problem. The dependence of the state on tax revenues is in particular crucial for developing countries with less strong institutions and fewer sources of funding (Jenkins and Newell, 2013). The consequences of tax avoidance affect the environmental, social and economic aspects of the society, and thus demand a shift in values towards long-term responsibility (Bird and Davis-Nozemack, 2016). The interpretations of tax avoidance range from economic explanations, arguing that CSR and tax avoidance could never be Pareto optimal in a social sense, to political interpretations describing tax avoidance as anti-democratic (Dowling, 2014). The shift of norms may be based on hard law provisions and accompanied by a soft law approach (Bird and Davis-Nozemack, 2016). The soft law approach implies a self-regulating and norm-based acting, both inside the organisation as well as towards the outside stakeholders (Bird and Davis-Nozemack, 2016). The adverse effects of tax avoidance affect not just the outside stakeholders but also the company itself because of potential misallocation of funds, reputational risks and the effects on the corporate culture (Fisher, 2014). From a CSR point of view, firms have an obligation to conform to ethical and social demands from the society (Bird and Davis-Nozemack, 2016). Even though companies commit themselves to transparency, the disclosures on tax-related issues often remain vague (Ylönen and Laine, 2015). The paper by Preuss (2010) analysed the discrepancy between CSR and tax avoidance by comparing US companies with firms engaged in activities in offshore finance centres (Preuss, 2010). Preuss (2010) argues the movement to tax heavens is an act of companies escaping from legal, regulatory and social pressure. The offshore companies claim to act according to CSR principles, but in essence, do not do so, neither contribute to society in any other (economic) way. Preuss (2010) concludes that CSR reporting is used as a measure to claim organisational legitimisation.

The paper of Huseynov and Klamm (2012) analyses the fees paid to auditors for tax services, the effective tax rates and their dependency on CSR. The paper captures CSR by including community and diversity measures in addition to governance measures. The findings indicate that tax fees lead to lower effective tax rates for firms with strong corporate governance and diversity, while fees for tax services are associated with a higher effective tax rate for firms with community concerns (Huseynov and Klamm, 2012). Huseynov and Klamm (2012) further point out alternative proxies of governance such as compensations, the number of board members, etc. The researchers demonstrate a relationship between the fees paid for tax services and tax avoidance according to the level of CSR reporting (Huseynov and Klamm, 2012). Huseynov and Klamm (2012) conclude that firms reducing tax payments have stronger governance, community and diversity characteristics. Similarly, the paper by Lanis and Richardson (2012) analysing an Australian sample finds a significant positive association between corporate tax aggressiveness and CSR disclosure (Lanis and Richardson, 2012).

Hoi *et al.* (2013) take a broad definition of CSR and define "irresponsible" CSR activities as harmful actions to corporate governance, employees, society, environment, etc. Likewise, tax avoidance is regarded as "irresponsible" and harmful to the society (Hoi *et al.*, 2013). It is worth noticing that the researchers assume a close relationship between CSR and corporate governance. The paper finds evidence that firms with more "irresponsible" CSR activities are more likely to engage in tax avoidance (Hoi *et al.*, 2013). The relation does not hold for "responsible" CSR activities.

The recent study by Davis *et al.* (2016) confirms the proposition that CSR is negatively related to the effective tax rate. The study analyses a sample of US corporations. Further, CSR is positively related to tax lobby expenses (Davis *et al.*, 2016). Davis *et al.* (2016) suggest that CSR and taxes act as substitutes rather than complements.

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A number of studies analysed the value impact of CSR, and the literature finds ambiguous results on whether CSR creates value (Salzmann, 2013). The literature supports the value creation relevance of CSR reporting. A positive relation between CSR and financial performance was found by Margolis and Elfenbein (2008), referring to an analysis of 167 studies. A study by Cahan *et al.* (2015) distinguishes CSR disclosures in more detail and defines unexpected disclosure as incremental information disclosure. Higher unexpected CSR disclosure is related to higher firm value (Cahan *et al.*, 2015). The study of Cahan *et al.* (2015) comprises international data from a variety of countries. Furthermore, Cahan *et al.* (2015) relate their findings to the political influences, such as democracy, press freedom and environmental commitments. However, some studies such as the paper by Muller and Kolk (2015) finds that firms with stronger CSR characteristics pay higher taxes. Similarly, Laguir *et al.* (2015) find that CSR and tax rate are positively related, and the relationship is mainly driven by social and economic factors of CSR. This intuitive argumentation follows the resource-based view, i.e. that firms use CSR to signal their performance.

Most empirical studies on the relationship of CSR and tax avoidance analyse it on a firm-level basis. In contrast, Jackson and Apostolakou (2010) suggest a categorisation and separation of liberal market economies in the Anglo-Saxon countries from coordinated market economies in the continental European countries (Jackson and Apostolakou, 2010). In Europe, only Ireland and the UK are counted as liberal market economies (Jackson and Apostolakou, 2010). The paper finds that CSR may take a substituting role for weaker institutions in liberal market economies (Jackson and Apostolakou, 2010). This approach is adopted to this analysis to gain some insight why there is a difference between the tax avoidance behaviour of firms from different countries.

The literature widely affirms that increased CSR is associated with lower effective tax rates. This supports the claims of Sikka (2010, 2013) accusing firms of acting "hypocrite". The research on tax avoidance and corporate governance finds evidence for an impact on value creation. Little is known how CSR affects the relationship between value creation and tax avoidance. It follows that an analysis of the value impact is worth further investigation in the context of CSR.

This paper attempts to answer the nature of the relationship between tax avoidance and value creation for European companies. Furthermore, it is attempted to clarify the effect of CSR on the relationship between tax avoidance and value creation. In the following, the impact of CSR in analysed by investigating the social and environmental characteristics of European corporations. The following hypothesis is supposed to clarify the questions arising above:

H2. CSR has an influence on the relationship between tax avoidance and value creation.

3. Research design

3.1 Sample selection

The panel data comprise European companies from 20 different countries and contain 7,924 observations over the years 2005-2014. The source of the data is the Thomson Reuters Datastream database. The selection captures all European companies listed in the Asset4 index. This index provides data on corporate governance and CSR. No specific industries are excluded. The European sample was chosen to ensure a large enough sample to derive meaningful interpretations. It is assumed that the European Union directives requiring rough cornerstones on CSR reporting and ensure a certain degree of comparability (Sassen *et al.*, 2016). The sample size across European companies is larger than testing individual European countries. Further, companies in Europe may compare their CSR behaviour to their peers, and thereby allow comparison.

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The Asset4 index, as used in this study, relies on the categories "Environmental", "Social" and "Corporate Governance". The environmental score captures emission reduction, resource reduction and product innovation. The social score accounts for employment quality, health and safety, training and development, diversity, human rights, community and product responsibility. The corporate governance score evaluates the board structure, board function, compensation policies, shareholder rights, as well as vision and strategy. The Asset4 procedure accounts for continuous scores and true/false questions. These are aggregated and summed up to weighted scores ranging from 0 to 100 or respectively 0 to 100 per cent.

The Asset4 database was chosen because it belongs to one of the most reliable and complete sources of CSR data collected from publicly available sources (Stellner *et al.*, 2015). The data set takes more than 900 evaluation points into account which are subsequently transformed into consistent units that are necessary for a quantitative analysis of qualitative data (Ioannou and Serafeim, 2012). The CSR scores allow an evaluation based on objective criteria. The environmental, social and governance scores are analysed separately to avoid the problem of deriving appropriate weights of the categories as pointed out by Ioannou and Serafeim (2012). The Asset4 database suits well to the sample of European firms due to its emphasis on the employee category (Chatterji *et al.*, 2016).

3.2 Methodology

OLS regressions are used to test the relationship between CSR and tax avoidance. The regressions include industry, year and country fixed effects. It seems likely that there are patterns over the years in the panel data set. Similarly, firms may adjust their CSR efforts to other peers in the industry. Also, there may be patterns across countries. The regression model relies on the Tobin's *q*-ratio as a proxy for value creation. Tax avoidance is measured by the effective tax rate ("ETR"). The distinction between tax evasion and other versions of fraud is not made for this analysis. The GAAP ETR used in this analysis is defined as the total income tax expense as shown in the financial statements divided by the pre-tax accounting income. ETR is calculated on a year-by-year basis. It is not affected by tax deferral strategies (Hanlon and Heitzman, 2010). ETR is required to be positive. The deferred tax assets are not included in the calculation because of the focus on tax avoidance in the short term (Desai and Dharmapala, 2009). There remain measurement errors considering earnings management, etc. that may affect or shift taxes in previous or subsequent years. The CSR scores used comprise the social score, the environmental score and corporate governances score from the Asset4 database.

The following control variables are included in the regression following Davis *et al.* (2016): the size of the companies measured as the log of total assets (to capture the size), the debt over lagged total assets (to capture the financing choice), intangible assets over lagged total assets (widely cited as being related to tax management), pre-tax income over lagged total assets (to capture the profitability), ROE (to capture the efficiency), SG&A expense over lagged total assets (to capture the cost structure), PPE over lagged total assets (to capture the tangible presence), cash over lagged total assets (to capture the liquidity) and the price to book value of equity (to capture the valuation aspects). The year, industry and country influences are controlled for by using a fixed effects model developed by Correia (2014). All variables are winsorized at the first and ninety-ninth percentile. The statistical procedure of the winsorization follows Yu-Jun (2014) and replaces extreme values with the first and ninety-ninth percentile. The analysis requires non-missing values for any variable.

The Tobin's *q* is introduced to measure value creation and is used as an independent variable in the regression function. The definition of the Tobin's *q* variable follows Bryant-Kutcher *et al.* (2012):

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$$Tobin's\ q = \frac{Market\ Value\ of\ Firm}{Book\ Value\ of\ Total\ Assets}$$

The Tobin's *q* ratio is defined as the market value of the replacement costs of the assets (Bryant-Kutcher *et al.*, 2012). The replacement costs of the assets are not known, and therefore assumed to be equal to the book value of assets (Bryant-Kutcher *et al.*, 2012). The replacement costs suppose the Tobin's *q* is a determinant of investment (Blundell *et al.*, 1992). Following the study of Desai and Dharmapala (2009), deferred tax expenses are not subtracted in the numerator assuming a focus on tax avoidance which may lead to future tax liabilities. An advantage of the Tobin's *q* variable is the implicit acknowledgement of expectations built in the market value of capital (Bond and Devereux, 1989). Potential measurement errors may result from the volatility of the stock market, as the Tobin's *q* is the ratio of the market value of capital to the replacement value of the capital stock (Bond and Devereux, 1989). A greater Tobin's *q* implies that additional investment creates value resulting from the profits exceeding the cost of the assets. A negative relation between ETR and the Tobin's *q* variable means the relation between ETR and value creation is not driven by the growth potential of investment (Bryant-Kutcher *et al.*, 2012).

The regression models are described in the following. In the first model, the governance, social and environmental scores are grouped in above and below mean performers. ETR is used as an independent variable. The Tobin's *q* is used as a dependent variable. This regression is repeated for the different CSR scores grouped by performance:

$$Tobin's\ q = \beta_1 + \beta_2\ ETR + \beta_3\ Controls + \varepsilon$$

In the second model, the analysis is extended for the influence of the type of market economy. The sample is grouped by liberal and coordinated market economy as suggested by Jackson and Apostolakou (2010). Ireland and the UK are regarded as liberal market economies, and the companies from the other European countries build the coordinated market economy group (Jackson and Apostolakou, 2010). In this regression, ETR is used as the dependent variable and the CSR scores are used as the independent variables:

$$ETR = \beta_1 + \beta_2\ Governance\ Score + \beta_3\ Social\ Score + \beta_4\ Environmental\ Score + \beta_5\ Controls + \varepsilon$$

One limitation of the study is the possible selection bias resulting from a sample only covering European companies, not the subsidiaries of non-European companies active in Europe. Further, the results may be biased considering that components of the CSR scores could correlate with the effective tax rate. The interpretation of the findings assumes that the firms reporting and actual performance do not deviate. A further remark, as pointed out by Hanlon and Heitzman (2010), is the measurement of tax avoidance, which relies on the financial statements and is subject to variation over the years. Further, Hanlon and Heitzman (2010) describe tax avoidance as idiosyncratic and dependent on a variety of factors and individual firm-level characteristics.

4. Results

In the following, the results of the empirical analysis are presented. Table I gives an overview of the variables.

The descriptive statistics reveals the first insight into the data. In the sample (Table II), the mean of the social score is around 66.0 per cent, the mean of the environmental score is around 63.9 per cent, the mean of the governance score is around 55.8 per cent. The standard deviation varies between 26.9 per cent and 29.0 per cent for all three CSR variables. The mean of ETR observed in the sample is around 27.6 per cent for the European companies.

The comparison between liberal and coordinated market economies shows that the mean of ETR is similar for both subsamples (Table III). The mean governance score for the liberal

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Table I Overview variables

Variables	*Description*
ETR	Effective tax rate = (Total tax + other tax)/Pre-tax income [GAAP effective tax rate]
GovernScore	Corporate governance score
SocialScore	Social score
EnvScore	Environmental score
Tobin's *q*	Tobin's *q* = MV Firm/BV total assets
Size	Size variables = ln (total assets)
Leverage	Leverage variables = (long-term debt + short-term debt)/lagged total assets
Intang	Intangible assets variable = Intangible assets/ lagged total assets
PretaxIncome	Pre-tax income of lagged total assets
ROE	Return on equity variables = (Net income)/Equity × 100
SG&A	Sales general and admin expense variable = SG&A/ lagged total assets
PPE	PPE variable = PPE/lagged total assets
Cash	Cash variable = Cash/ lagged total assets
PriceToBookV	Price-to-book value of equity
Fixed effects year	Fixes effects for the year effects 2005-2014
Fixed effects industry	Fixes effects for the industry effects (industrial, utility, transportation, bank/saving and loan, insurance, other financial institutions)
Fixed effects country	Fixes effects for country effects (ISO country codes: AT, BE, CH, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IT, NL, NO, PL, PT, SE, TR)

Table II Descriptive statistics

Variable	*Observed*	*Mean*	*SD*	*Minimum*	*Maximum*
ETR	7,924	27.57249	18.71226	0.11	145.22
GovernScore	6,765	55.82523	26.8713	2.96	95.09
SocialScore	6,765	66.02179	27.84761	5.14	97.51
EnvScore	6,765	63.89383	29.0001	9.66	96.45
TobinsQ	7,527	1.226676	1.029875	0.0376	6.065
Size	7,923	15.70879	2.052829	11.40939	21.26237
Leverage	7,873	0.2723762	0.2116063	0	1.098321
Intang	7,873	0.2147835	0.2231338	0	0.9655494
PretaxInco	7,873	0.100544	0.0944063	0.0000398	0.4975099
ROE	7,722	23.66607	99.87119	−395.86	7206.45
SGA	7,852	0.1556929	0.1960434	0	0.9858895
PPE	7,841	0.286285	0.2749234	0.0008883	1.129776
Cash	7,858	0.1270085	0.1405279	0.0016891	0.848319
PriceBookV	7,538	2.794927	2.978454	−3.95	20.37

Table III Descriptive statistics coordinated market economies and liberal market economies

Variable	*Observed*	*Mean*	*SD*	*Observed*	*Mean*	*SD*
	Coordinated market economies			*Liberal market economies*		
ETR	5,316	27.53624	18.49166	2,608	27.64638	19.15742
GovernScore	4,462	46.70367	26.2964	2,303	73.498	17.54648
SocialScore	4,462	67.54824	28.68965	2,303	63.06433	25.89022
EnvScore	4,462	65.95918	29.64309	2,303	59.89227	27.27658
TobinsQ	5,057	1.137862	0.963954	2,470	1.408511	1.131808

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market economies of 73.5 per cent is substantially higher compared to the one for the coordinated market economies of 46.7 per cent. The environmental and social scores are closer together for the two types of economies. The coordinated market economies show a slightly higher social (environmental) performance of 67.5 per cent (65.9 per cent) compared to 63.1 per cent (59.9 per cent) for the liberal market economies.

The differences in the governance score between liberal and coordinated market economies could be explained by the different ownership structures and financing traditions. The significantly lower levels of the governance score for the coordinated market economy subsample could indicate differences in the internal governance or decision-making. The source of financing could be an explanation as well. Similarly, the corporate governance structure may affect the cost of equity (Feng *et al.*, 2015). Evidence by Gramlich and Finster (2013) suggests that the level of corporate sustainability influences the financial risk for companies. A possible explanation may be that firms in coordinated market economies show a higher degree of ownership concentration, and banks being the fundamental source of financing and performing the monitoring, thus, have a different demand for sustainability reporting (Mietzner *et al.*, 2011). Presumably, the different relevance of CSR may impact the incentives for firms to engage in CSR. The financing environment in coordinated market economies may show many characteristics of a bank-based system, with an emphasis on relationship-based lending (Dietrich and Vollmer, 2012). This may result in different demands of the stakeholders. Sassen *et al.* (2016) find that higher social performance decreases risk. The low significance of the governance variable of firms in coordinated market economies may reflect a lack of governance mechanisms, which, in turn, may result from the different stakeholder demands of companies in those economies. These possibly impact tax management too. There could be a lower demand for governance-related information for companies in coordinated market economies due to their relations with banks instead of the reliance on the marked-based financing. The higher levels of social and environmental disclosures of the coordinated market economy firms could indicate that firms attempt to compensate a lack of governance by engaging in other forms of CSR. These claims give room for further verification.

The correlation analysis (Table IV) shows a positive moderate correlation between the governance score and the social score, as well as the governance score and the environmental score. The correlation between the environmental and the social score is strong and positive. The social score and the environmental score are highly correlated. The correlation between the CSR variables and ETR is rather low. The governance score shows a weak and negative correlation with ETR. The correlation between ETR and the social score/the environmental score is weak and positive. This gives the first indication that the corporate governance score behaves differently compared to the social score and environmental score. The Tobin's *q* shows a weak and negative correlation to the CSR variables.

The variables are tested for multicollinearity. The variance inflation factor ("VIF") values for the independent variables are reported in the following. Table V gives the multicollinearity test for the regression analysis grouped by high vs low CSR. In Table VI, the same test procedure is repeated for the regression analysis by type of economy. The data indicate that multicollinearity is not an issue for both data sets.

In the following, the results of the regression analysis are discussed. Table VII shows the regression of ETR on the Tobin's *q* variable. The regressions (1) and (2) are grouped by low and respectively high levels of corporate governance. Neither of the two regressions proofs significant. ETR has high explanatory significance of the Tobin's *q* for low social performing firms (Table VII, Regression 3 and 4). The relationship appears positive. It follows that a higher ETR is associated with higher value creation for firms with low levels of the social score. For firms with high social scores, the relation is not significant and the coefficient is

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Table IV Correlation matrix

Variable	ETR	GovernScore	SocialScore	EnvScore	TobinsQ	Size	Leverage	Intang	PretaxInco	ROE	SGA	PPE	Cash	PriceBookV
ETR	1.0000													
GovernScore	−0.0048	1.0000												
SocialScore	0.0896	0.4398	1.0000											
EnvScore	0.0617	0.4091	0.7850	1.0000										
TobinsQ	−0.0547	−0.0238	−0.1067	−0.1240	1.0000									
Size	0.0242	0.0237	0.3778	0.3596	−0.4036	1.0000								
Leverage	−0.0028	−0.0365	0.0428	0.0342	−0.0738	0.1479	1.0000							
Intang	0.0078	0.1194	0.0604	0.0120	0.1879	−0.1892	0.1792	1.0000						
PretaxInco	−0.1239	−0.0469	−0.1590	−0.1505	0.7617	−0.3921	−0.1915	0.0824	1.0000					
ROE	−0.0375	0.0476	0.0000	−0.0006	0.1272	−0.0769	0.0317	−0.0079	0.1431	1.0000				
SGA	0.0244	0.0036	−0.0121	−0.0398	0.4254	−0.3373	−0.1701	0.2012	0.3656	0.0640	1.0000			
PPE	−0.0161	−0.0404	−0.0262	0.0259	0.0776	−0.1325	0.3147	−0.2353	0.1130	0.0035	−0.0780	1.0000		
Cash	−0.0359	−0.0598	−0.1119	−0.1400	0.3211	−0.2549	−0.1913	−0.0362	0.4127	0.0564	0.1986	−0.0917	1.0000	
PriceBookV	−0.0281	0.0345	−0.0340	−0.0682	0.6624	−0.2836	−0.0188	0.1243	0.5121	0.2330	0.3167	−0.0586	0.2146	1.0000

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Table V Test for multicollinearity for the independent variables of the regression by CSR level

Variable	*VIF*	*SQRT VIF*	*Tolerance*	R^2
ETR	1.02	1.01	0.9768	0.0232
Size	1.41	1.19	0.7088	0.2912
Leverage	1.42	1.19	0.7022	0.2978
Intang	1.31	1.15	0.7608	0.2392
PretaxInco	1.89	1.37	0.5290	0.4710
ROE	1.07	1.03	0.9371	0.0629
SGA	1.32	1.15	0.7582	0.2418
PPE	1.47	1.21	0.6785	0.3215
Cash	1.30	1.14	0.7716	0.2284
PriceBookV	1.50	1.23	0.6657	0.3343

Table VI Test for multicollinearity for the independent variables of the regression by type of economy

Variable	*VIF*	*SQRT VIF*	*Tolerance*	R^2
GovernScore	1.33	1.15	0.7534	0.2466
SocialScore	2.92	1.71	0.3423	0.6577
EnvScore	2.73	1.65	0.3659	0.6341
Size	1.73	1.32	0.5776	0.4224
Leverage	1.44	1.20	0.6942	0.3058
Intang	1.37	1.17	0.7279	0.2721
PretaxInco	1.87	1.37	0.5339	0.4661
ROE	1.07	1.03	0.9375	0.0625
SGA	1.32	1.15	0.7567	0.2433
PPE	1.50	1.23	0.6656	0.3344
Cash	1.29	1.14	0.7735	0.2265
PriceBookV	1.53	1.24	0.6554	0.3446

almost zero. The results look similar for the environmental score. The same relation holds for the social score and the environmental score (Table VII, Regression 5 and 6). The test procedure reveals that there is a highly significant and positive association between ETR and value creation for firms with low environmental scores. The relationship disappears for firms with above mean environmental scores.

One possible explanation may be that the tax systems work the way they should for firms with low social and environmental characteristics. The analysis infers that tax avoidance does not create value for the low CSR performers. It seems possible that tax avoidance may not create value for various reasons. Managers tend to engage in tax management because it is believed to be their duty to maximise shareholder value. One reason why tax avoidance may not pay off is the well-functioning of law books and tax audits. Another reason is that it costs a lot of money to engage in tax avoidance. The fees paid to tax advisors, law firms and other professional advisors such as trustees and bankers can be substantial. Most tax codes have substance requirements for entities in low-tax countries. Fulfilling the substance requirements often means that managers have to be hired and perform some kind of management activity. Besides the founding costs, the entities need to be managed over time and costs occur for staff and legal statements. All entities need to file tax returns and prepare statements for consolidation in the tax group. Founding entities abroad to divert taxes or constructing obscure financing arrangements may cost far more than the resulting few percentage points in reducing ETR. The reasoning is similar to entrepreneurs only buying assets to take advantage of depreciation and amortisation legislation. These investments lower the tax payments but do not generate value for the entrepreneur either. A further problem lies in dissolving the complex structures. Funding entities and setting up a tax management scheme may be quick. However, reversing the

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Table VII Regression analysis, Tobin's *q* as the dependent variable, ETR as the independent variable, grouped by high and low levels of CSR

Dependent variable	*(1) Low GovernScore Tobin's q*	*(2) High GovernScore Tobin's q*	*(3) Low SocialScore Tobin's q*	*(4) High SocialScore Tobin's q*	*(5) Low EnvScore Tobin's q*	*(6) High EnvScore Tobin's q*
ETR	−0.0003 (0.0007)	0.0003 (0.0005)	0.0025*** (0.0008)	−0.0003 (0.0005)	0.0027*** (0.0009)	−0.0001 (0.0005)
Size	−0.0594*** (0.0094)	−0.0542*** (0.0066)	−0.1236*** (0.0144)	−0.0479*** (0.0060)	−0.0979*** (0.0145)	−0.0502*** (0.0059)
Leverage	0.0788 (0.0694)	0.2363*** (0.0611)	0.2520*** (0.0780)	0.0325 (0.0593)	0.2836*** (0.0809)	0.0225 (0.0581)
Intang	0.2146*** (0.0667)	0.4492*** (0.0530)	0.3354*** (0.0746)	0.4277*** (0.0520)	0.2527*** (0.0769)	0.4979*** (0.0511)
PretaxIncome	5.6804*** (0.1667)	5.6625*** (0.1457)	5.1260*** (0.1799)	5.9016*** (0.1457)	5.5531*** (0.1921)	5.6655*** (0.1388)
ROE	−0.0097*** (0.0008)	−0.0002*** (0.0001)	−0.0004 (0.0003)	−0.0004*** (0.0001)	−0.0007** (0.0003)	−0.0003*** (0.0001)
SGA	0.5237*** (0.0698)	0.5262*** (0.0540)	0.5324*** (0.0759)	0.5321*** (0.0527)	0.5724*** (0.0769)	0.4998*** (0.0523)
PPE	0.2569*** (0.0601)	0.2626*** (0.0482)	0.2254*** (0.0612)	0.3012*** (0.0499)	0.1460** (0.0675)	0.3523*** (0.0474)
Cash	0.0529 (0.0900)	0.6094*** (0.0808)	0.3446*** (0.1056)	0.4594*** (0.0777)	0.2712** (0.1073)	0.4480*** (0.0768)
PriceToBookV	0.2293*** (0.0061)	0.0954*** (0.0037)	0.1351*** (0.0052)	0.1120*** (0.0040)	0.1383*** (0.0055)	0.1105*** (0.0038)
Constant	0.9529*** (0.1565)	0.8353*** (0.1111)	1.8244*** (0.2291)	0.7820*** (0.1043)	1.4303*** (0.2324)	0.8110*** (0.1008)
Number of observations	2,881	4,426	2,666	4,641	2,604	4,703
R^2	0.8330	0.7156	0.7815	0.7281	0.7819	0.7241
F	683.0210	638.1963	500.8743	639.6688	478.3382	650.7753
Fixed effects	Year, Country, Industry	Year, Country, Industry	Year, Country, Industry	Year, Country, Industry	Year, Country, Industry	Year, Country, Industry

Notes: Standard errors are presented in parentheses; *, ** and *** denote significance at the 10, 5 and 1% levels, respectively

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structures may be not. Once contracts are signed for a certain period of time, they have to be fulfilled in most jurisdictions. This can lead to firms operating artificial structures far away from the economic reality even though the tax advantages for which the tax structure was invented do not exist anymore. Legislation changes fast, and tax loopholes available today may not be there anymore a year later. Even if advanced pricing agreements were negotiated, there is no guarantee that these are extended beyond the usual few years of validity.

The European companies analysed in this sample do not have their headquarters in the USA, and the holding companies do not fall under the US tax legislation. Thus, they cannot take advantage of deferring overseas profits. The numerous examples of companies criticised publicly for tax avoidance are mostly American conglomerates that channel the foreign (non-USA) profits in tax havens. Ultimately, these profits are subject to tax when repatriated to the USA. This paper argues that tax avoidance is not as successful as proclaimed in the discussions in the media, given the scale it appears to have. Arranging the real world such that some economic reality is met only to benefit from tax management strategies may lead to inefficient decision-making and value destruction. It seems likely that both is the case.

The authors of this paper believe that tax avoidance is not worth it. Probably, there were cases in which multinational groups divert large sums of taxes. However, this study concludes that there is no significant statistical evidence that tax avoidance creates value. Neither is there any evidence that strong corporate governance can make it worthwhile. This study cannot confirm the claims by Desai and Dharmapala (2009) stating that the engagement in tax avoidance creates value for firms with strong corporate governance. As indicated by the empirical findings, there is no significant relationship between value creation and tax avoidance and for companies with low or high levels of corporate governance. This paper extends the analysis to CSR. The firms with weak social and environmental CSR characteristics show a positive association between ETR and value creation. The higher the Tobin's *q*, the higher the tax levies. This fits the economic intuition of tax systems arguing that value-generating firms pay higher taxes. If tax management was creating value, such a relation had to show a negative association between ETR and the Tobin's *q*, so the lower the ETR, the higher the value creation. This is not the case in the analysis at hand.

It remains open why the positive relationship between value creation and ETR only holds for low levels of social and environmental performance. One could argue that low CSR performers are particularly bad tax avoiders. The firms that do not work responsibly on their social and environmental affairs do not do so on their tax issues either. Alternatively, CSR may be used as a legitimisation of tax avoidance, so high tax avoidance is associated with high CSR activities, and low CSR firms are not the ones that engage in tax avoidance. This argument does not yet make claims on whether tax avoidance creates value or not. There is evidence in the literature that there is a positive association between CSR and tax avoidance, i.e. firms attempt to divert attention from the tax management strategies by engaging in CSR (Sikka, 2013; Davis *et al.*, 2016). This paper argues that firms with low CSR characteristics may not belong to the group of firms that engage in valuable tax management. Thus, ETR is positively associated with value creation. In conclusion, the interpretations of the findings are that tax avoidance is not creating value, and possibly, firms with low CSR do not engage in tax avoidance.

The subsequent model (Table VIII) analyses the relationship between ETR and CSR grouped by the type of economy. The model analyses the relationship between ETR and CSR, first, for the liberal market economies (Table VIII, Regression 1), and second, for coordinated market economies (Table VIII, Regression 2). Different from the previous analysis, the differences between countries are of interest, so the regressions use fixed effects only for the year and the industry. For the coordinated market economies, the

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Table VIII Regression analysis, Tobin's *q* as the dependent variable, ETR as the independent variable, grouped by type of economy

Dependent variable	*(1)* *Coordinated market economies* *ETR*	*(2)* *Liberal market economies* *ETR*
GovernScore	−0.0363*** (0.0132)	−0.0580** (0.0286)
SocialScore	0.0645*** (0.0171)	0.0341 (0.0246)
EnvScore	−0.0087 (0.0160)	−0.0329 (0.0228)
Size	−0.0804 (0.2162)	0.6444* (0.3321)
Leverage	2.7346 (1.8768)	−3.9781* (2.3235)
Intang	−4.3800** (1.8394)	−5.7595*** (2.0976)
PretaxIncome	−27.1345*** (4.7620)	−33.2667*** (5.1935)
ROE	−0.0874*** (0.0111)	0.0006 (0.0023)
SGA	3.1855 (1.9501)	3.8437* (2.0570)
PPE	−0.3757 (1.6540)	−3.6244** (1.7644)
Cash	−6.0653** (2.6840)	4.7166 (3.1294)
PriceToBookV	0.4315*** (0.1610)	0.2152* (0.1249)
Constant	30.5638*** (3.4688)	27.3251*** (4.7775)
Number of observations	4,309	2,173
R^2	0.0773	0.1181
F	16.8788	6.1964
Fixed effects	Year, Industry	Year, Industry

Notes: Standard errors are presented in parentheses; *, ** and *** denote significance at the 10, 5 and 1% levels, respectively

corporate governance score is a significant explanatory variable. The coefficients indicate a negative relationship. Thus, a lower corporate governance score is associated with a higher ETR. The opposite relation holds for the social score. The relationship is highly significant and positive. For the liberal market economies, only the corporate governance score is significant and stands in a negative relationship with ETR.

The governance variable is negatively related to ETR in both the coordinated and the liberal market economies. The lower the governance characteristics, the higher the ETR. The firms with governance weaknesses may be unable to capitalize from tax management. This argumentation is extensively discussed in the agency cost theory, as proclaimed by Desai and Dharmapala (2009). The effect is differently strong for the two types of economies. The coefficients show that the relation is only half as strong for firms in coordinated market economies. The difference may result from a different corporate governance culture in the coordinated market economies. The descriptive analysis reveals that the liberal market economies have a significantly higher corporate governance level. This could be the result of different financing forms. The liberal market economies are characterised by market-based financing, while the coordinated market economies tend to have relationship-based financing with banks (Dietrich and Vollmer, 2012). In the liberal market economies, the markets monitor firms and demand higher levels of corporate governance (Qian and Yeung, 2015). There are more differences between coordinated and liberal market economies, such as institutions, legal circumstances and the fraction of government activity in the economy, etc. (Beck *et al.*, 2011). It seems likely that these impact the tax jurisdiction and the taxpaying culture. The negative relationship between corporate governance and ETR could be interpreted in such a way that strong governance signals superior management. This, in turn, leads to managers effectively decreasing the tax payments. They may do so regardless whether it creates value or not.

The social score is highly significant and positively related to ETR for the firms in coordinated market economies. Higher taxes are associated with higher social performance. The companies with social strengths may show a higher degree of social responsibility with regard to their tax management. The social characteristics towards firms' stakeholders appear to include the collection of government revenue. The positive

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association between the social score and ETR fits intuitively to the common understanding of social responsibility. The interpretation implies that social incentives could help to tackle tax avoidance. The promotion of favourable social behaviour by firms may suit as a possible way to curb the engagement in tax management. This study proposes to encourage firms to become more social. An increase of social strengths could have positive externalities on tax revenue. However, this analysis does not make claims of the causation. The regression does not say whether a higher social score leads to a higher ETR, or vice versa, a higher ETR leads to a higher social score.

Leuz *et al.* (2003) find that the relationship between earnings management and corporate governance is likely to be endogenous. The level of disclosure is not seen as an exogenous factor in explaining financing and ownership (Leuz *et al.*, 2003). A causality remains unclear because of a lack of an exogenous source of variation. Thus, this analysis potentially suffers from an endogeneity bias. Possibly, besides the endogeneity, the results may suffer from omitted correlated variables and concurrent events (Ball *et al.*, 2015).

A potential solution of the endogeneity issues is the use of an instrument. Such an instrument needs to be correlated with the endogenous regressor, but uncorrelated with the error in the structural equation (Larcker and Rusticus, 2010). The variables used as instruments had to be sufficiently exogenous and not affecting the dependent variable other than through the independent variable (Larcker and Rusticus, 2010). Few reliable instruments in the CSR literature fit this analysis. The suggested measures are amongst others, CSR spending, intangible assets or donations, etc. However, none of the proposed instruments proved both correlated with the endogenous regressor and uncorrelated with the error in this analysis. As a result, no IV regression model was applied to the above analysis.

5. Conclusion

This paper attempts to answer whether a lower ETR leads to higher value creation for European companies. The research is motivated by understanding how the value creation argument works and tries to come up with explanations how agency conflicts create or destroy value. The study challenges the traditional view that reducing the ETR creates value by lowering the tax payments. Potential agency costs, etc. could outweigh the tax savings, as suggested by the literature on corporate governance. The traditional drivers of tax avoidance, such as increasing shareholder value or optimising cash flows, are complemented with the implications of agency conflicts. Furthermore, this paper tries to identify what influences the relationship between CSR and tax avoidance by analysing the difference between coordinated and liberal market economies. The study tested the proposition that tax avoidance is negatively related to CSR as firms attempt to divert attention from tax avoidance.

The analysis showed that governance strengths are unlikely to enable firms to create value by minimising their tax bill. The firms with weak social and environmental characteristics show that a higher ETR is associated with higher value creation. This is because either low CSR performers do not engage in tax avoidance or the tax systems work the way they should and tax avoiders are unable to capitalise from tax avoidance. This paper contributes to the literature by suggesting that the positive value impact via tax avoidance given strong corporate governance is incomplete or not transferrable to European companies.

We find that higher corporate governance characteristics are associated with lower ETRs in both coordinated and liberal market economies. This may be evidence that firms with strong corporate governance manage to minimise their ETR. Presumably, these firms do so regardless of whether this ultimately creates value or not. In coordinated market economies, firms with strong social characteristics pay higher taxes. The social

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characteristics could play a higher role in coordinated market economies and align firms' social behaviour with the attitude towards taxation.

In conclusion, tax avoidance does not create value for the European companies. However, firms with governance strengths show a lower ETR. The findings show that higher value creation is associated with a higher ETR. The results indicate that tax avoidance is not a driver of value creation. The positive relationship can confirm that the tax systems in Europe work as they should. The analysis could not find evidence that the agency costs-based framework developed for samples in the USA is transferable to European companies. The regression showed that firms with social strengths pay higher taxes. This finding contrasts the "smoke and mirror" argument by Sikka (2010) stating that ETR is negatively related to the CSR score. The social strengths may reflect the firms' internal structure more closely, while the environmental score may be more detached from the firms' actions. The finding supports the intuitive argument that more sustainable firms show higher value creation.

This analysis covers data for the years 2005 to 2014 and looks at the time before the OECD published the revised base erosion and profit shifting guidelines and before the corresponding EU directive. In the meantime, tax avoidance reached high attention by the media and politics across Europe. Changes in tax avoidance behaviour over the next years seem likely. We encourage further research on the effects of these initiatives on tax avoidance and CSR.

This paper proposes to increase transparency demands for CSR reporting. The society would benefit if companies pay their fair share of taxes. The willingness to engage in tax avoidance strategies may decrease if public awareness of tax-related issues would affect firms' revenues. The CSR reporting is an opportunity for firms to signal their corporate responsibility, and the findings indicate that the European companies indeed do so. The positive relation between ETR and the value variable should make firms reconsider whether engaging in tax management is worth it.

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