Relationship between corporate social responsibility and tax avoidance: international evidence

Tao Zeng

Tao Zeng is based at the Lazaridis School of Business and Economics, Wilfrid Laurier University, Waterloo, Canada.

Abstract

Purpose – *This paper aims to examine the relationship between corporate social responsibility (CSR) and tax avoidance as well as how CSR and country-level governance interplay in affecting tax avoidance in an international setting.*

Design/methodology/approach – *This paper is an empirical work using listed companies from 35 countries and relying on several proxies for corporate tax avoidance activities including the difference between the statutory tax rate and the annual effective tax rate, the book-tax difference and the residual book-tax difference.*

Findings – *This study finds strong evidence that CSR is positively related to tax avoidance. It also finds that in countries with weak country-level governance, firms with higher CSR scores engage in less tax avoidance, implying that CSR and country-level governance are substitutes.*

Originality/value – *This paper is the first study that examines the relationship between CSR and tax avoidance in an international setting with different legal and institutional environment.*

Keywords Tax avoidance, Corporate social responsibility (CSR), Effective tax rate, Book-tax difference, Country-level governance

Paper type Research paper

1. Introduction

In recent years, an increasing number of studies have shown that corporate tax avoidance is associated with corporate governance, executive incentives and social responsibility, to name a few (Hanlon and Heitzman, 2010, for a summary). Corporate social responsibility (CSR) has also received increased attention from both businesses and academics and studies on the relationship between CSR and tax avoidance become growing (Davis *et al.*, 2016; Zeng, 2016; Watson, 2015). However, all of these studies focus on a specific country such as Australia, Canada, Nigeria and the USA, and the results are mixed (Davis *et al.*, 2016; Watson, 2015; Otusanya, 2011). Cross-country studies of CSR and tax avoidance in various legal and institutional environments are rare. However, the role played by government and regulation in the market and corporations varies across country. For example, unlike the US Government, in Canada, the government plays a significant role in supporting universal social programs (Foster and Meinhard, 2002). Mahoney and Thorn (2006) indicate that a country's institutional context, such as legal and regulatory structures affects a firm's sensitivity toward its social performance. Stephenson and Vracheva (2015) also argue that the study of CSR and tax avoidance should consider institutional discrepancies because they can affect a firm's stakeholder position.

This paper fills the gap by examining the relationship between CSR and tax avoidance as well as how CSR and country-level governance interplay in affecting tax avoidance in an

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international setting. Country-level governance, such as quality and enforcement of law and government effectiveness, reflects a country's legal and institutional environment. It is argued that both CSR and corporate tax avoidance and their relationship are affected by a specific country's legal, political and institutional situation. Using listed companies from 35 countries and relying on several proxies for corporate tax avoidance activities including the difference between the statutory tax rate and the annual effective tax rate (ETR), the book-tax difference and the residual book-tax difference, I find strong evidence that CSR is positively related with tax avoidance. I also find that in countries with weak country-level governance, firms with higher CSR scores engage in less tax avoidance, implying that CSR and country-level governance are substitutes.

Overall, the results found in this study indicate that the relationship between CSR and tax avoidance varies with a country's legal and institutional environment.

There are two reasons why an international setting is used in this study to investigate the relationship between CSR and tax avoidance. First, corporate tax avoidance is a global issue, and a greater number of tax studies are investigating what is associated with tax avoidance activities in both industrial countries and emerging markets. To date, research on the relationship between CSR and tax avoidance only examines one country at a time. By using a cross-country study, this paper provides a more comprehensive understanding of this relationship. Second, firms' CSR activities and the degree of the impact of CSR on tax avoidance are likely to depend on a country's legal and institutional environment. It is not clear whether CSR plays a large or small role in tax avoidance in countries with strong institutions compared with those with weak institutions. This study seeks to shed some light on this issue.

This study makes several important contributions. First, it contributes to the growing literature on the relationship between CSR and tax avoidance (Davis *et al.*, 2016; Watson, 2015; Lanis and Richardson, 2012). While CSR can be affected by a country's legal and institutional environment, prior research mainly studies the relationship between CSR and tax avoidance in a single country. I contribute to the current literature by examining this relationship in an international setting.

I also contribute to the literature on the relationship between CSR and tax avoidance by examining the effect of the interplay between country-level governance and CSR on tax avoidance. My results show that in countries with weak country-level governance, higher CSR scores are related to less tax avoidance. These results suggest that CSR and country-level governance are substitutes in these countries.

The balance of this paper is organized as follows. Section 2 reviews current literature on country-level governance, accounting standards and tax avoidance, and develops the hypotheses. Section 3 describes the sample and measurements and designs the empirical models. Testing results are presented in Section 4. Finally, a conclusion and summary is presented in Section 5.

2. Literature review and hypothesis development

2.1 Corporate social responsibility and tax avoidance

Given the fact that CSR has received increased attention recently, a number of tax studies attempt to explore the relationship between CSR and tax aggressiveness, and the results are mixed.

On the one hand, it is argued that one perspective of CSR, i.e. the social perspective, considers corporate tax payment to be a very important component. Paying tax is an important way for firms to engage positively with society. Firms with the goal of becoming socially responsible citizens would pay their fair share of taxes. Indeed, paying tax is the bottom line for a responsible citizen in society, and tax avoidance

contradicts being a good corporate citizenship or assuming CSR. It has been demonstrated that CSR is negatively associated with corporate tax avoidance activities by several studies. For example, Lanis and Richardson (2012) argue that firms that disclose more CSR information are less likely to engage in tax-aggressive activities. Using a sample of Australian public companies, they find a negative relationship between CSR disclosure and tax aggressiveness. Watson (2015) finds that, in the USA, firms with low CSR scores undertake more aggressive tax activities such as more book-tax differences, low-ETRs and more tax-sheltering activities. In addition, Watson (2015) finds that socially irresponsible firms generally have larger unrecognized tax benefits than socially conscious firms. He argues that socially responsible firms attract consumers and investors with similar norms and values and therefore deter these firms' tax aggressiveness activities. Likewise, Hoi et al. (2013) document that socially irresponsible firms are more likely to avoid taxes using the sample of the US firms for the period 2003 to 2009. Zeng (2016) finds that CSR is negatively associated with tax avoidance in Canada. Finally, Ki (2012) also finds a negative relationship between CSR and tax avoidance in South Korea.

On the other hand, existing tax studies indicate that tax avoidance is primarily a matter of a managers' discretional and opportunistic behavior for rent extraction (Desai and Dharmapala, 2006; Wilson, 2009; Chen et al., 2010). If managers pursue their own private benefits and avoid taxes, they may use CSR to conceal these activities based on the positive effects of CSR. In such cases, managers gain insurance by engaging in CSR.

In addition, tax avoidance is a risky activity as it imposes huge costs on firms, such as scrutiny by the government and the public, which can damage their reputations. CSR can protect firms from risk when negative corporate events occur. Indeed, firms can handle environmental turbulence and threats to their reputation by disclosing CSR statements and codes of ethics and by promising to engage in responsible behavior. In such cases, the CSR statement may simply be used to satisfy critical outside demands rather than enable stakeholders to monitor managers' compliance with these promises. Consistent with this point of view about CSR, a number of studies find that CSR and tax avoidance are positively related. Preuss (2010) examines the US firms with Offshore Finance Centre and finds that firms claiming to engage in socially responsible activities are actually based in tax havens. He argues that, when firms ignore their basic contributions to society, e.g. tax payment, but claim to be socially responsible, CSR merely becomes nothing more than window dressing. Sikka (2010) examines a couple of well-known large firms such as Enron, Worldcom, KPMG and Wal-mart and highlights the divergence between these firms' claims of social responsibility and their tax avoidance activities. He finds that CSR information disclosed in these firms has been used intentionally to obscure their tax avoidance. In a study by Davis et al. (2016), which analyzes whether paying corporate tax is viewed as socially responsible for the US public firms, the authors find that CSR is negatively associated with the ETR but is positively associated with tax-lobbying expenditures. Their results imply that socially responsible firms pay less tax and engage in more tax lobbying.

Finally, Huseynov and Klamm (2012) find that the different perspectives of CSR have different impacts on tax avoidance activities. They report that, while the interaction of governance strength and diversity concerns with tax service fees are negatively associated with tax avoidance, the interaction of community concerns with tax service fees are positively associated with tax avoidance.

In summary, given the mixed results on the relationship between CSR and tax aggressiveness, I specify the non-directional hypothesis as follows:

H1. Firms with higher CSR engage in more/less tax avoidance than other firms.

2.2 Role of country-level governance in the relationship between corporate social responsibility and tax avoidance

The relationship between CSR and tax avoidance may not be uniform across countries with different legal and institutional environments. This is because CSR, from an ethical perspective, is a reflection of social morals, norms and values. Thus variations exist across countries. In this study, I seek to examine the interaction between CSR and country-level legal and institutional environments and how this interaction affects tax avoidance.

Country-level governance, which reflects a country's political, legal and institutional environment, has been shown to influence decision-making such as earnings manipulation and tax non-compliance (Riahi-Belkaoui, 2004; Picur and Riahi-Belkaoui, 2006; Otusanya, 2011; McGee, 2012). To begin with, it is not obvious whether CSR and country-level governance complement their effects on tax avoidance or are substitutes in their effects on tax avoidance. On the one hand, when country-level governance is stronger, CSR statements allow less discretion and require more disclosure and transparency. Consistent with this view, Cahan et al. (2016) examines CSR disclosure in 21 countries and finds that countries with strong institutions enhance more CSR disclosures. When CSR is of higher quality with more disclosures and transparency, it may be less likely to be used as a smoke screen to disguise underlying tax avoidance behavior. That is, good country-level governance will build trust with all stakeholders and will demand that firms deliver more detailed information and transparency about their tax and CSR data. Transparent and detailed CSR reports help outsiders separate CSR activities motivated by managers to conceal their opportunistic behavior for the purpose of increasing their private benefits from those motivated by managers whose intent is to be genuine, sincere and trustworthy.

Good governance may also facilitate stakeholders and outsiders such as the media, the government and the public to exert pressure on firms by enforcing them to incorporate tax responsibility in their CSR repots and disclose more about the structures and strategies for avoiding taxes. Intense scrutiny for tax avoidance and negative media about their discrepancies between what they claim in their CSR reports and what they do to avoid taxes may deter corporate tax avoidance behavior, as scrutiny and reputational damage are two of the non-tax costs associated with a firm's tax avoidance.

On the other hand, firms in a weak legal and institutional environment would voluntarily disclose high-quality CSR with more transparency to differentiate them from other firms. In such cases, CSR is a substitute for the weak country-level governance.

Given the alternative views about the role of the country-level governance on the relationship between CSR and tax avoidance, I specify the following hypothesis in null form:

H2. The relationship between CSR and tax avoidance does not vary with country-level governance.

3. Research design

3.1 Sample and data

Samples in this study are taken from the top 40 countries (based on GDP) during the period 2011 to 2015[1]. Financial information is collected from Thomson Reuters Datastream. All data are converted to US dollars. For each country, I have selected the non-financial firms on the Datastream Global Equity Indices. Datastream Global Equity Indices include stocks from over 50 countries. Firms on Datastream Global Equity Indices are generally large firms with stocks covering over 70 per cent of market capitalization in each country. Most of countries in my sample have 50 to 100 stocks on the indices. However, there are 1,000 stocks from the USA and Japan and 550 stocks from the UK To prevent observations in these three countries from dominating the samples, I select firms on the S&P 500 composite for the USA (500 stocks), the NIKKEI 225 Stock Exchange for Japan (225 stocks) and

FTSE350 for the UK (350 stocks). They are the most widely quoted indices, which include large firms from each of the three countries.

The firms in my sample should meet the following three conditions:

1. their financial data are available from Datastream for any of the years between 2011 and 2015;

2. their CSR data are available from Datastream for any of the years between 2011 and 2015; and

3. they are not financial institutions, partnerships, income trusts or income funds because they are generally subject to different tax treatments or use different accounting standards.

This leaves a sample consisting of 9,945 firm-year observations.

3.2 Measurement of tax avoidance

Tax avoidance can be defined broadly as any activity that reduces or defers tax liability. Hanlon and Heitzman (2010 p. 137) indicate:

> If tax avoidance represents a continuum of tax planning strategies where something like municipal bond investments are at one end (lower explicit tax, perfectly legal), then terms such as "noncompliance," "evasion," "aggressiveness" and "sheltering" would be closer to the other end of the continuum. A tax planning activity or a tax strategy could be anywhere along the continuum depending upon how aggressive the activity is in reducing taxes.

A firm's tax avoidance can be measured in three basic ways, as developed by prior tax avoidance research (Adhikari *et al.*, 2006; Robinson *et al.*, 2010; Chen *et al.*, 2010; Armstrong *et al.*, 2012; Lennox *et al.*, 2013; Balakrishnan *et al.*, 2013; Guenther, 2014; Amidu *et al.*, 2016).

First, tax avoidance is measured as the annual *ETR*, which is defined as the total tax expenses (the sum of the current tax expenses and the deferred tax expenses) on the income statement (WC01451), deflated by pre-tax earnings on the income statement (WC01401). Robinson *et al.* (2010) and McGuire *et al.* (2014) indicate that, the annual ETR reflects the tax planning and tax avoidance activities that directly affect a firm's net earnings and is usually used by stakeholders and managers to estimate a firm's overall tax burden. I dropped the firm-year observations with negative pre-tax earnings, as the ETR calculated by negative pre-tax earnings is not meaningful. I have also set the negative annual ETR s to zero and set the annual ETR s to one for those greater than one. As different countries have different statutory tax rates (*STR*), I subtract the annual ETR s from statutory tax rates (*STR-ETR*). Hence, the larger the deviation of the annual ETR s from statutory tax rates, the greater the tax avoidance.

Second, tax avoidance can be measured as the difference between pre-tax earnings and taxable income, scaled by firm size, i.e. total assets (*BTD*). Taxable income is generally estimated as the total tax expenses dividend by the statutory tax rate. I delete the firm-year observations with a net loss, as it is unclear as to what the appropriate tax rate used to estimate taxable income.

Finally, the third measurement of tax avoidance is the residual book-tax gap (*RES BTD*). Prior literature documents that the book-tax gap can be enlarged by either increasing accounting income, or reducing taxable income or both. In other words, earnings management, which increases book income, will affect the book-tax difference (Desai and Dharmapala, 2006; Chen *et al.*, 2010; Lim, 2011).

To exclude earnings management from the book-tax gap, I regress the book-tax gap (*BTD*) on the total accruals (*TAC*) to identify the component of the book-tax gap that cannot be

explained by earnings management $BTD_{it} = \delta_1 TAC_{it} + \varepsilon_{it}$. Where the total accruals (TAC) is defined as earnings before extraordinary items net of cash flows from operation, deflated by total assets. The residual from the regression ($RES\ BTD$) is the BTD that will not be explained by earnings management.

The statutory tax rates are collected from KPMG Global Tax Rates.

3.3 Country-level governance

Country-level governance is measured using the Government Index taken from the World Governance Indicator (WGI), which is published by the World Bank.

WGI measures the quality of country-level governance for over 200 countries and economic bodies by using six governance indicators (voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption). It has a minimum estimated value of −2.5 (weakest governance) and a maximum estimated value of 2.5 (strongest governance).

In this study, I use four of the six WGI indicators and calculate the mean scores. These four WGI indicators have been shown to be relevant to a country's legal and institutional situations (Gonzalez and Garcia-Meca, 2014). They are government effectiveness, regulatory quality, rule of law and control of corruption.

3.4 Corporate social responsibility

CSR data can be collected on Datastream. Datastream provides CSR scores, including total scores, environment, economic, social and governance scores, as well as other relevant CSR data for about 5,000 major firms around the world based on internationally recognized standards. The scores are measured between 0 and 1.

The environmental score measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems. It reflects how well a company uses best management practices to avoid environmental risks and to capitalize on environmental opportunities to generate long-term shareholder value.

The economic score measures a company's capacity to generate sustainable growth and a high return on investment through the efficient use of all its resources. It is a reflection of a company's overall financial health and its ability to generate long-term shareholder value through its use of best management practices.

The social score measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It is a reflection of the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long-term shareholder value.

The corporate governance score measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances to generate long-term shareholder value.

Total score is measured as the equal weighted rating of all the above four perspectives and reflects a balanced view of a company's performance in economic, environmental, social and corporate governance areas.

3.5 Control variables

I control for the country-level and firm-level factors that could potentially affect a firm's tax avoidance, as documented in previous studies (Stickney and McGee, 1982;

Zimmerman, 1983; Ronen and Aharoni, 1989; Omer *et al.*, 1993; Gupta and Newberry, 1997; Phillipes, 2003; Adhikari *et al.*, 2006; Dyreng *et al.*, 2008; Zeng, 2010; Dyreng *et al.*, 2010; Chen *et al.*, 2010; Robinson *et al.*, 2010; Zeng, 2011; Lennox *et al,.* 2013; Armstrong *et al.*, 2012; Kim and Zhang, 2016; Kanagaretnam *et al.*, 2016).

First, at the country level, I control for the worldwide tax system (*WW*), measured as an indicator variable, equal to one if the country's tax system is based on a worldwide approach and zero if the country's tax system is based on a territorial approach; the common law country (*COM*), an indicator variable, equal to one for the common law country and zero for the civil law country; the economic development (*GDP*), measured as the log of GDP per capita; and the statutory tax rate (*STR*).

Next, at the firm level, I control for firm size (*SIZE*), measured as the log of total assets (WC02999); profitability *(ROA)*, measured as net earnings before extra items and preferred dividends (WC01551) dividend by total assets; the adoption of International Financial Reporting Standards (*IFRS*), an indicator variable, equal to one for firms adopting IFRS and zero otherwise; debt-asset ratio (*LEV*), measured as the sum of short-term and long-term debts (WC03255) dividend total assets; capital property (*PPE*), measured as the ratio of net property, plant and equipment (WC02501) over total assets; intangible asset (*INT*), measured as net intangible assets (WC02649) over total assets; inventory intensity (*INV*), measured as the ratio of inventories total (WC02101) over total assets. In addition, I control for industry and year fixed effects by including the industry and year dummy variables.

3.6 Regression model

To determine the relationship between country-level governance, the adoption of IFRS and tax avoidance, and to test the hypotheses, we design the following regression models:

$$
\begin{aligned}
TA_{it} = {} & \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 WW_{it} + \alpha_3 COM_{it} + \alpha_4 IFRS_{it} + \alpha_5 GDP_{it} + \alpha_6 STR_{it} + \alpha_7 SIZE_{it} \\
& + \alpha_8 ROA_{it} + \alpha_9 LEV_{it} + \alpha_{10} PPE_{it} + \alpha_{11} INV_{it} + \alpha_{12} INT_{it} \\
& + industry \ \& \ Year \ dummies + \varepsilon_{it} \qquad (1)
\end{aligned}
$$

$$
\begin{aligned}
TA_{it} = {} & \gamma_0 + \gamma_1 INSL_{it} + \gamma_2 INSH_{it} + \gamma_3 INSL_{it} \times CSR_{it} + \gamma_4 INSH_{it} \times CSR_{it} + \gamma_5 STR_{it} \\
& + \gamma_6 WW_{it} + \gamma_7 COM_{it} + \gamma_8 GDP_{it} + \gamma_9 IFRS_{it} + \gamma_{10} SIZE_{it} + \gamma_{11} ROA_{it} + \gamma_{12} LEV_{it} \\
& + \gamma_{13} PPE_{it} + \gamma_{14} INV_{it} + \gamma_{15} INT_{it} + industry \ \& \ Year \ dummies + \varepsilon_{it} \qquad (2)
\end{aligned}
$$

where:

TA = Tax avoidance, measured as three ways: the difference between statutory tax rate and annual effective tax rate *(STR-ETR)*; the book-tax difference (*BTD*); and the residual book-tax difference (*RES BTD*).

INSL = Weak country-level governance, measured as the bottom 20 per cent of country-level governance (*INS*).

INSH = Strong country-level governance, measured as the top 20 per cent of country-level governance (*INS*).

INS = The mean score of the four legal and institutional variables: government effectiveness (GE), regulatory quality (RQ), rule of law (ROL) and control of corruption (COC).

CSR = Total CSR scores, the mean score of social scores (*SS*), environmental scores (*ENS*), economic scores (*ECS*) and governance scores (*GS*).

WW = An indicator variable, equal to one if the country's tax system is based on a territorial tax system, and zero otherwise.

COM = An indicator variable, equal to one for the common law country, and zero otherwise.

IFRS = An indicator variable, equal to one for firms using IFRS, and zero otherwise.

GDP = Log of GDP per capita.

STR = A country's statutory corporate tax rate.

SIZE = Firm size, measured as the log of total assets.

ROA = Profitability, measured as net earnings (losses) over total assets.

LEV = Leverage, measured as total debts over total assets.

INT = The ratio of intangible assets over total assets.

PPE = Capital intensity, the ratio of net property, plant and equipment over total assets.

INV = Inventory intensity, the ratio of total inventory over total assets.

4. Results

4.1 Sample and univariate statistics

Table I reports the sample selection. The final sample includes 8,993 firm-year observations from 36 countries. The observations are generally distributed evenly across the sample periods – 1,715, 1,750, 1,799, 1,876 and 1,853 observations for each year from 2011 to 2015.

Table II documents the descriptive statistics of the variables. For the tax avoidance proxies, it shows that, on average, the *STR-ETR* is positive and equal to 2.22 per cent; the book-tax gap (*BTD*) is positive and equal to 0.005. It implies that firms, on average, have an annual ETR that is lower than the statutory tax rate, and that they report more accounting income than taxable income. However, the residual book-tax gap (*RES BTD*) is negative and equal to −0.007, which implies that firms report more taxable income than accounting income if we exclude total accruals from *BTD*.

For CSR scores and country-level governance, the table shows that the mean values are 0.632 and 1.236, respectively.

Table II also documents the statistics for the control variables. It reveals that, at the country level, about 53 per cent of firms are from common law countries; about 28 per cent of firms are from countries based on worldwide tax systems. On average, the statutory tax rate (*STR*) is 29.7 per cent; GDP per capita (*GDP*) is 4.561. At the firm level, it reveals that, on average, firm size (*SIZE*) is 6.907; profitability (*ROA*) is 0.072; leverage (*LEV*) is 0.254; intangible assets (*INT*) is 0.193; capital property (*PPE*) is 0.32; and inventory intensity (*INV*) is 0.098.

Table III presents the Pearson correlation matrix, which document the correlations between the major variables. The maximum absolute value of the correlation is 0.972 between *BTD* and *RES BTD*. The minimum absolute value of the correlation is 0.001 between *INV* and *BTD*. The table shows that all *CSR* variables are positively associated with the three tax avoidance proxies, but country-level governance (*INS*) is negatively associated with these tax avoidance proxies.

Table I Sample selection	
Firms on Datastream Global Equity Indices 4,667 firms × 5 years	23,335
Less: financial institutions 1,151 firms × 5 years	(5,755)
Less: Firms without CSR data	(7,518)
Less: Firms without complete financial data	*(120)*
	9,942
Less: Firms with negative pre-tax earnings	(949)
Final sample	8,993

Table II	Descriptive statistics				
Variable	Median	Mean	SD	Minimum	Maximum
STR-ETR	0.022	0.018	0.161	−0.835	0.407
BTD	0.005	0.010	0.050	−0.996	1.099
RES BTD	−0.007	−0.004	0.050	−1.003	1.082
COM	1	0.530	0.500	0	1
WW	0	0.279	0.448	0	1
IFRS	1	0.557	0.497	0	1
GDP	4.621	4.561	0.241	3.785	4.931
STR	0.300	0.297	0.076	0.165	0.407
INS	1.450	1.236	0.704	−0.650	2.132
CSR	0.740	0.632	0.290	0.028	0.971
SIZE	6.873	6.907	0.643	4.690	10.947
ROA	0.056	0.072	0.106	−0.706	6.477
LEV	0.245	0.254	0.171	0	2.306
PPE	0.270	0.320	0.232	0	1.915
INV	0.070	0.098	0.108	0	0.934
INT	0.115	0.193	0.204	0	0.916

Table III	Pearson correlation matrix															
VAR.	STR-ETR	BTD	RES BTD	COM	WW	DEV	IFRS	GDP	STR	INS	CSR	SIZE	ROA	LEV	PPE	INV
STR-ETR																
BTD	0.595															
RES BTD	0.569	0.972														
COM	0.137	0.112	0.107													
WW	0.204	0.159	0.142	0.308												
DEV	0.067	0.035	0.025	0.142	0.047											
IFRS	−0.170	−0.132	−0.120	−0.229	−0.428	0.028										
GDP	0.015	−0.027	−0.037	0.232	0.276	0.678	−0.043									
STR	0.238	0.185	0.169	0.152	0.465	0.403	−0.492	0.106								
INS	−0.019	−0.050	−0.062	0.267	0.015	0.709	0.086	0.871	−0.049							
CSR	0.038	0.006	0.013	0.062	0.019	0.270	0.059	0.142	0.159	0.150						
SIZE	−0.020	−0.063	−0.040	−0.116	0.167	−0.011	−0.192	0.065	0.179	−0.082	0.343					
ROA	0.094	0.203	0.186	0.116	0.020	−0.044	0.012	−0.040	−0.045	−0.024	−0.051	−0.233				
LEV	−0.006	−0.027	−0.011	−0.021	0.042	−0.010	−0.030	−0.015	0.069	−0.061	0.026	0.205	−0.198			
PPE	−0.085	−0.092	−0.039	0.036	−0.072	−0.104	0.017	−0.105	−0.084	−0.105	0.010	0.150	−0.103	0.176		
INV	−0.014	0.001	0.006	−0.043	−0.031	0.035	−0.012	−0.005	−0.013	0.028	0.029	−0.139	0.034	−0.191	−0.220	
INT	0.103	0.046	0.010	0.137	0.083	0.279	0.125	0.194	0.106	0.176	0.097	−0.053	−0.031	0.115	−0.509	−0.209

4.2 Multivariate results

Table IV presents the results of the relationship between CSR and corporate tax avoidance. Column 2 reports the results with tax avoidance being measured as the spread between the statutory tax rate and the annual ETR (STR-ETR); Column 3 reports the results with tax avoidance being measured as the book-tax difference (BTD); and Column 4 reports the results with tax avoidance being measured as the residual book-tax difference (RES BTD).

All the three columns in Table IV show that the coefficients on CSR are positive and statistically significant, which implies that firms with higher CSR scores engage in more tax avoidance activities. It is consistent with the findings in Preuss (2010), Sikka (2010) and Davis et al. (2016) and supports the view that CSR is used by managers to conceal their risky and opportunistic tax avoidance activities and mitigate reputation and image damages resulted from tax avoidance. Overall, the results from 35 countries found in this study find a positive relation between CSR and tax avoidance.

Table IV	Primary results for *H1*		
Parameter	ETR-STR	BTD	RES BTD
INTERCEPT	0.167*** (4.29)	0.083*** (6.93)	0.049*** (4.01)
CSR	*0.018*** (2.84)*	*0.004** (2.01)*	*0.004* (1.91)*
WW	0.035*** (7.44)	0.009*** (6.47)	0.009*** (6.49)
COM	0.02*** (5.39)	0.005*** (4.57)	0.005*** (4.35)
IFRS	−0.016*** (−3.82)	−0.002* (−1.82)	−0.003** (−1.94)
GDP	−0.04*** (5.53)	−0.016*** (−7.08)	−0.016*** (-7.04)
STR	0.316*** (11.71)	0.086*** (10.34)	0.085*** (10.03)
SIZE	−0.01*** (−3.34)	−0.004** (−3.79)	−0.003*** (-3.59)
ROA	0.12*** (7.47)	0.085*** (16.94)	0.084*** (16.63)
LEV	−0.003 (−0.28)	0.006* (1.76)	0.006* (1.80)
PPE	0.012 (1.17)	−0.005* (−1.76)	−0.006** (1.96)
INV	0.012 (0.69)	−0.003 (−0.54)	−0.003 (-0.53)
INT	0.062*** (5.61)	−0.001 (−0.17)	−0.001 (-0.17)
Industry	Yes	Yes	Yes
year	Yes	Yes	Yes
obs	8.993	8,993	8,993
Adj R-sq	0.11	0.11	0.08

Notes: Model: $TA_{it} = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 WW_{it} + \alpha_3 COM_{it} + \alpha_4 IFRS_{it} + \alpha_5 GDP_{it} + \alpha_6 STR_{it} + {}_{\alpha7} SIZE_{it} + \alpha_8 ROA_{it} + \alpha_9 LEV_{it} + \alpha_{10} PPE_{it} + \alpha_{11} INV_{it} + \alpha_{12} INT_{it} + industry \& Year\ dummies + \varepsilon_{it}$; ***significant at 0.01 level, **significant at 0.05 level, *significant at 0.1 level based on two-tailed *t*-test

Table IV also reports that some control variables are statistically significant. For instance, at the country level, firms are more likely to engage in tax avoidance in countries with higher statutory tax rates (*STR*), perhaps because there are more tax benefits extracted from tax avoidance when statutory tax rates are high. This is consistent with the findings by Kanagaretnam *et al.* (2016). Firms also engage in more tax avoidance activities in common law countries and in countries with territorial tax systems, which is consistent with Atwood *et al.* (2012). The results show that firms that adopt IFRS avoid less tax. One explanation is that IFRS provides more disclosure and transparent information, which prevents mangers from engaging in opportunistic activities such as tax avoidance activities.

At the firm level, firm size (*SIZE*) is negatively associated with tax avoidance, which is consistent with Zimmerman (1983), Ronen and Aharoni (1989), Omer *et al.* (1993), Zeng (2010) and Kim and Zhang (2016). It supports the argument that large firms suffer more political and reputational costs from engaging in tax avoidance.

The coefficient on *ROA* is positive, which implies that more profitable firms engage in more tax avoidance. This is consistent with Dyreng *et al.* (2008) and Lennox *et al.* (2013) and suggests that firms with more profits or resources are able to engage in higher level of tax avoidance activities. Consistent with Stickney and McGee, (1982) and Gupta and Newberry (1997), *PPE* is negatively associated with *BTD* and *RES BTD*, suggesting that firms with higher level of capital property intensity engage in less tax avoidance.

The coefficient on *LEV* is positive for *BTD* and *RES BTD*, which implies that firms with higher leverage avoid more tax. It is consistent with the argument that interests from borrowings are tax deductible and hence reduce firm tax liabilities (Stickney and McGee, 1982; Zeng, 2010; Chen *et al.*, 2010). Finally, consistent with Kim and Zhang (2016), intangible asset intensity (*INT*) is positively associated with *STR-ETR*, which implies that firms with more intangible assets engage in more tax avoidance.

Table V presents the results of how CSR and country-level governance interplay in affecting tax avoidance. Column 2 reports the results when tax avoidance is measured as the spread between statutory tax rate and annual ETR (*STR-ETR*); Column 3 reports the results when tax avoidance is measured as the book-tax difference (*BTD*); Column 4 reports the results when tax avoidance is measured as the residual book-tax difference (*RES BTD*).

Table V Primary results for *H2*

Parameter	ETR-STR	BTD	RES BTD
INTERCEPT	0.256*** (4.09)	0.080*** (4.11)	0.046** (2.34)
CSR	0.036*** (4.44)	0.008*** (3.07)	0.007*** (2.90)
INSL	0.028*** (2.56)	0.007** (2.14)	0.007** (2.01)
INSH	0.010 (0.96)	0.004 (1.28)	0.004 (1.33)
INSLxCSR	−0.074*** (−5.23)	−0.012*** (−2.65)	−0.011** (−2.50)
INSHxCSR	−0.01 (−0.68)	−0.005 (−1.18)	−0.005 (−1.11)
WW	0.035*** (7.55)	0.009*** (6.24)	0.009*** (6.31)
COM	0.02*** (5.38)	0.005*** (4.42)	0.005*** (4.17)
IFRS	−0.016*** (−3.82)	−0.002* (−1.80)	−0.003** (−1.93)
GDP	−0.062*** (−4.69)	−0.016*** (−3.79)	−0.016*** (−3.84)
STR	0.325*** (11.32)	0.088*** (9.92)	0.087*** (9.71)
SIZE	−0.011*** (−3.44)	−0.004** (−3.89)	−0.004*** (−3.67)
ROA	0.123*** (7.60)	0.085*** (16.94)	0.084*** (16.63)
LEV	−0.002 (−0.24)	0.006* (1.79)	0.006* (1.84)
PPE	0.012 (1.15)	−0.006* (−1.76)	−0.006** (1.98)
INV	0.009 (0.48)	−0.003 (−0.61)	−0.003 (−0.60)
INT	0.061*** (5.50)	−0.001 (−0.31)	−0.001 (−0.31)
Industry	Yes	Yes	Yes
year	Yes	Yes	Yes
obs	8.993	8,993	8,993
Adj R-sq	0.11	0.11	0.08

Notes: Model: $TA_{it} = \gamma_0 + \gamma_1 INSL_{it} + \gamma_2 INSH_{it} + \gamma_3 INSL_{it} \times CSR_{it} + \gamma_4 INSH_{it} \times CSR_{it} + \gamma_5 STR_{it} + \gamma_6 WW_{it} + \gamma_7 COM_{it} + \gamma_8 GDP_{it} + \gamma_9 IFRS_{it} + \gamma_{10} SIZE_{it} + \gamma_{11} ROA_{it} + \gamma_{12} LEV_{it} + \gamma_{13} PPE_{it} + \gamma_{14} INV_{it} + \gamma_{15} INT_{it} + industry$ & $Year\ dummies + \varepsilon_{it}$; ***significant at 0.01 level, **significant at 0.05 level, *significant at 0.1 level based on two-tailed *t*-test

All the three columns in Table V show that the coefficients on country-level governance (*INSL*) are positive and statistically significant. It implies that firms resident in countries with strong (weak) governance engage in less (more) tax avoidance activities. In other words, strong country-level governance prevents firms from avoiding taxes.

The results in Table V also show that, while *CSR* is positively associated with tax avoidance, the interaction between *CSR* and weak country-level governance (*INSL*) is negatively associated with tax avoidance, suggesting that, in countries with weak governance, firms with higher CSR scores engage in less tax avoidance. This negative relation between *CSR* and tax avoidance is consistent with Ki (2012), Lanis and Richardson (2012), Hoi *et al.* (2013), Watson (2015), and Zeng (2016).

Nevertheless, strong country-level governance (*INSH*) is not significantly associated with tax avoidance, neither is the interaction between *INSH* and *CSR*.

Overall, the results in Table V suggest that the positive relation between CSR and tax avoidance as reported in Table IV is mainly driven by the firms in countries with strong governance. Therefore, the relation between CSR and tax avoidance is complex and varies across countries.

4.3 Robustness tests

It is argued that the social score in the CSR calculation is measured based on some factors related to a firm's tax liability. To avoid an endogeneity problem in the CSR measurement, in a robustness test, I drop the social scores from the CSR measurement. The untabulated results are not significantly different from those presented in Tables IV and V.

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5. Conclusion and summary

This paper examines the relationship between CSR and tax avoidance as well as how CSR and country-level governance interplay in affecting tax avoidance in an international setting. Using listed companies from 35 countries and relying on several proxies for corporate tax avoidance activities including the difference between the statutory tax rate and the annual ETR, the book-tax difference and the residual book-tax difference, I find strong evidence that CSR is positively related with tax avoidance. I also find that in countries with weak country-level governance, firms with higher CSR scores engage in less tax avoidance, implying that CSR and country-level governance are substitutes.

Overall, the results found in this study indicate that the relationship between CSR and tax avoidance is complex and varies with a country's legal and institutional environment. To date, this study is the first research that investigates the relation between CSR and corporate tax avoidance in an international setting.

This study highlights the importance of CSR and country-level governance in shaping firms' tax avoidance activities. It has significant implications for policy makers, corporate managements and academics. It documents that, when CSR is positively associated with tax avoidance, improvement of country-level governance will lead to less corporate tax avoidance. In fact, CSR has attracted more attentions from academics, businesses and governments in recent years, and fruitful studies could be conducted to examine across country the relationship between CSR and other firm activities.

Note

1. I have dropped four countries that do not have Global Equity Indices on Datastream: Saudi Arabia, Nigeria, Iran and the UAE. I also dropped Argentina as firms in Argentina have no CSR information.

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Corresponding author

Tao Zeng can be contacted at: tzeng@wlu.ca