Is the top leadership of the organizations promoting tax avoidance?

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Abstract

Purpose – This paper aims to study the roles of CEOs, board of directors and accounting/auditing firms in the adoption of tax avoidance schemas.

Design/methodology/approach – A cross-national analysis with data from 22 countries is used to examine the relationship between tax avoidance and the ethical qualities of the top leadership of the organizations, the firm's profile and the tax/legal system characteristics.

Findings – The results show that the board of directors is the actor that contributes more to control tax avoidance cross-nationally, whereas the CEOs' role to contend this practice is less relevant. The outcomes for accounting/auditing firms reveal that the stronger standards these firms have, the more tax avoidance is observed.

Originality/value – The methodology (cross-national analysis) and dimensions examined (role of the actors/instances of discretional power) in this inquiry offer a novel perspective to the analysis of tax avoidance, as most scholarly studies have taken a national approach and have mainly focused on studying the characteristics of the firms involved in tax avoidance.

Keywords Corporate crime, Tax avoidance, Creative compliance

Paper type Research paper

Introduction

On 5 November 2012, the Committee of Public Accounts of the British House of Commons summoned various top executives and public officials to give oral evidence on tax avoidance. Matt Brittin, Google Vice President for Sales and Operations, Northern and Central Europe, was interrogated by the Chair, Margaret Hodge, as follows:

Q448 Chair: […] As I understand it, 92 per cent of all sales outside the USA are billed in Ireland. Is that right?

Matt Brittin: I am not sure if is 92 per cent, but the vast majority of sales outside the USA will be billed in Google in Ireland. That is correct.

Q449 Chair: Why?

Matt Brittin: First, let me say that we pay the tax we are required to pay in every country in which we operate, including the UK.

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Q450 Chair: Well, it depends where you choose to put the business, doesn't it? That is what this afternoon is all about. It depends where you choose to put the business.

Matt Brittin: […] [P]erhaps I can quickly talk about how Google is set up […]

Outside the USA, Google headquarters are located in Ireland under the name Google Ireland Limited. Google's Algorithms, located in Bermuda, owns Google's intellectual property rights outside the USA. Google Ireland pays royalties to Google's Algorithms, which in 2012 were 99.4 per cent of the operating profits. Google's Algorithms is not obliged to send profits to Google Incorporated, located in the USA, because of the tax legislation in Bermuda. Google UK is an agent of sales for Google Ireland, and therefore, Google UK does not pay tax on profits made in the UK.

Matt Brittin: […] [W]e, like any company, are required to do two things. One is to play by the rules, and when you set up internationally, you need to make decisions about how to protect your intellectual property and how to organize. Secondly, we are required to manage our costs efficiently in order to satisfy our shareholders. And our goal as a company is to –

Q484 Chair: So you are minimizing your tax even though it is unfair to British taxpayers.

Matt Brittin: It is not unfair to British taxpayers. We pay all the tax you require us to pay in the UK. We paid £6 million of tax last year.

Q485 Chair: We are not accusing you of being illegal; we are accusing you of being immoral.

Matt Brittin: It is not a matter of personal choice. (Extract taken from Committee of Public Accounts, 2012, pp. 78-83).

The Google case is an example among many others that can be given to illustrate the problem of tax avoidance worldwide. The description above illustrates how corporations adapt their structures to increase the benefits for their stakeholders. This was noted early on by Friedman (1970), who argued that "the social responsibility of the business is to make profits" and that the managerial duty of directors is the maximization of shareholder profits, constrained by compliance with the legal regulations. The purpose of this article is not to neglect profits but to scrutinize how they are made. This has been the core of the research agenda on corporate social responsibility (CSR).

CSR focuses on studying compliance with the regulations imposed by governmental agencies and self-regulations (Garsten and Hernes, 2009; McBarnet, 2007; Parker and Nielsen, 2011). McBarnet (2004), a leading scholar of the CSR approach, introduced the theory of creative compliance to illustrate how corporations structure or restructure their business practices and repackage them as a lawful practice. Thus, creative compliance denotes the use of technical legal work to manage practices that fall between lawfulness and illegality. Creative compliers do not follow the law in a strict sense, although these corporations claim to be open to legal scrutiny. In fact, creative compliers provide careful explanations of the procedures used and legal claims. The use of premeditated disclaimers and a double moral standard is a common practice of creative

compliers. According to McBarnet (2004), corporations should comply with not only the letter of the law but also its spirit.

This article studies the roles of CEOs, board of directors and accounting/auditing firms in the adoption of tax avoidance schemas. The analysis is based on a cross-national examination of the ethical characteristics of the top leadership of the organizations and the quality of the services provided by accounting/auditing firms. Control variables regarding tax system characteristics, firm profiles and legal system types are incorporated into the analysis to enhance the reliability of the results. By focusing on the people and the revision standards behind the decision of adopting tax avoidance, this research attempts to explore the problem of creative compliance with tax regulations in the organizations by answering the following question: Is the top leadership of the organizations promoting tax avoidance? This constitutes a novel approach to the study of tax avoidance, as existing scholarly analyses have mainly focused on characterizing firms involved in this practice, whereas only a handful of inquiries have examined the ethical attitudes and strength of internal procedures behind the adoption of this kind of strategy (see Dyreng *et al.*, 2008; Hanlon and Heitzman, 2010, for literature reviews).

The rest of this article is divided into four sections. The first section offers a literature review and introduces the research questions of this inquiry. The second section presents a description of the data used in the analysis, with their respective scales and sources. The third section reports the results of the statistical analysis – including a robustness check of the final model – and discusses the findings in relation to previous scholarly contributions. The final section offers conclusions.

Previous research

A great deal of research on tax avoidance has been published internationally in recent decades. Early studies focused on identifying the different mechanisms used by corporate tax avoiders, whereas more recent analyses have explored the role and characteristics of top executives whose companies are involved in this practice. Scholars have revealed that corporations involved in tax avoidance frequently relocate taxable income (such as royalties and dividends), adopt internal firm debts, use transfer prices, shift the capital structure of their companies and do not report geographic earnings (Bartelsman and Beetsma, 2003; Dyreng and Lindsey, 2009; Dharmapala and Hines, 2009; Dharmapala and Riedel, 2011; Faulkender and Petersen, 2012; Hope *et al.*, 2013). According to Taylor and Richardson (2012), corporations involved in tax avoidance often combine more than one of these practices. For example, in the case of Australian firms, they reported that "tax havens are often combined with thin capitalization and transfer pricing to maximize international tax avoidance opportunities" (Taylor and Richardson, 2012, p. 491).

Along with the tax avoidance mechanisms used by the corporations, the personal and managerial characteristics of decision makers involved in this practice have also attracted considerable research attention, as noted earlier. Bamber *et al.* (2010) reported that CEOs with an MBA degree are more likely to get involved in tax avoidance because they attempt to adopt the culture and style of others members of the business community, whereas CEOs who were born before the Second World War and who have served in the military are less often tax avoiders. Boone *et al.* (2013) found that CEOs with a Protestant background engage in more tax avoidance than their Catholic

counterparts, who have the tradition of supporting the poor. This coincides with Schafer and Simmons (2008), who noted that tax avoidance is used by CEOs who aim mainly to increase the profits for their stockholders, at the expense of the public interest.

Other studies have focused on the role of CEOs in the adoption of tax avoidance schemas because of the tremendous influence that these top executives have on the values and norms of their organizations (Hilary and Hui, 2009; Kumar *et al.*, 2011). Dyreng *et al.* (2010) followed the trajectory of CEOs who at some point were involved in tax avoidance scandals, as reported by the media. They observed that tax avoidance increased shortly after CEOs with a background of involvement in tax avoidance came into office and disappeared when these CEOs left the company. A study conducted by Chyz (2013) established that CEOs who are aggressive in their personal tax matters are more likely to adopt tax avoidance mechanisms in their firms. In this study, I propose to explore whether CEOs' views of the ethical behavior of their organizations influence the adoption of tax avoidance in their organizations, by examining the following hypothesis:

H1. CEOs who report that their firms have a strong ethical behavior are less likely to adopt tax avoidance mechanisms.

Scholarly attention has also been given to understanding the reactions of investors and corporate boards to the adoption of tax avoidance mechanisms in their corporations. By conventional wisdom, one would expect a hostile reaction of the financial markets when information on corporate tax avoidance is disclosed by journalists and activists. In this regard, Hanlon and Slemrod (2009) investigated the impact on stock prices after scandals on tax sheltering were revealed by the media. They reported a severe share price reduction in the retail sector, where consumers responded with hostility, in contrast to sectors where a high cash effective tax rate was considered a positive signal of management aggressiveness. A similar tendency was described by Frischmann *et al.* (2008), who studied the relationships between tax fines and tax avoidance. They found that being fined by the tax authority did not trigger investor concerns; on the contrary, this event evoked a positive response from shareholders, as it suggested that the firm tried to provide the best returns.

In the case of corporate boards the literature adopted another approach. Desai and Dharmapala (2009) found that tax avoidance is only used when there is a higher quality of firm governance. In the contrary case – when the quality of internal direction of the firm is poor – they reported that shareholders can obtain alternative rents through diversion of managerial activities; therefore, in these cases, shareholders do not adopt tax avoidance mechanisms. Chen *et al.* (2010) explored this finding in the case of family and non-family firms and obtained similar results. The overall conclusion of these studies suggests that poorly governed firms do not get involved in tax avoidance, because mismanagement is a more efficient mechanism to increase the rent of shareholders. However, these results have been contradicted by Khurana and Moser (2013), who demonstrated that institutional shareholders with a long-term horizon reduce tax-planning strategies, considering that tax planning is the result of managerial opportunism and lack of transparency. On the same line Lanis and Richardson (2011, 2012) found that when the board of directors was composed of a higher proportion of outside members, it was less likely that the firm was involved in tax aggressiveness, as well as when the firm had adopted a higher level of disclosure of CSR policy. Considering

the lack of concluding evidence on the role of corporate boards and investors on tackling tax avoidance, this study proposes to examine the efficacy of these governing instances by exploring the following hypothesis:

H2. Corporate boards and investors who demand that management be highly accountable tend to reduce the use of tax avoidance mechanisms in their corporations.

The decision to adopt tax avoidance schemas is not restricted only to the top leadership of the organizations. Accounting/auditing firms can also advise their clients on tax issues. Existing studies on the role of these firms in tax avoidance offer contradictory evidence as to whether they contribute to increased tax avoidance among their clients. Gleason and Mills (2011) argued that firms using tax services from their audit companies have higher tax reserves, which indicates that the effect of the auditing company has a spillover effect that tends to enhance the performance of the corporations, whereas Armstrong *et al.* (2011) demonstrated that the more a company spends in tax services provided by auditing firms, the lower the effective tax rate it pays. For example, in 2011, KPMG advised General Electric (GE) to adopt "a series of complex transactions and accounting gimmicks to make its tax liability disappear". Despite GE's worldwide profits of US$14.2bn, which include US$5.1bn from the operation in the USA, the company paid zero tax in the USA (Sikka and Willmott, 2013, p. 427; these scholars also reported cases of tax avoidance that involved Ernst & Young, PricewaterhouseCoopers and Deloitte & Touche). This evidence suggests that auditing firms are somehow responsible for the adoption of tax avoidance schemas of their clients; however, this is an issue that needs further verification. Here, this concern will be assessed by testing the following hypothesis:

H3. In countries with strong auditing standards, corporations are less likely to adopt tax avoidance strategies.

Data used in the analysis

The examination of the three hypotheses was performed through a cross-national analysis, which includes data on the CEOs' perceptions on the ethical behaviour of their firms, the efficacy of the board of directors/investors, the strength of auditing standards, the company characteristics and the types of legal systems. Data on the concepts outlined above were gathered from different sources and aggregated into a database. After this procedure was completed, I was able to assemble complete information for 22 countries, on which this analysis rests. This is considered a large sample, taking into account that cross-national studies frequently use samples of 12 countries in their analyses (Lieberman, 2005). The names of the countries included in this inquiry appear in Appendix 1, the variables used in this study are summarized in Appendix 2 and their descriptive statistics are stated in Appendix 3. A detailed description of these variables is given below.

Dependent variable

The central variable of this study is tax avoidance, which is defined in the literature as the explicit reduction of tax liabilities (Stiglitz, 1985). Tax avoidance is neither registered in the financial statements of the corporations nor reported as such by tax authorities. Because of the hidden characteristics of this phenomenon, scholars usually use proxies

to capture it. Hanlon and Heitzman (2010) surveyed the literature and reported the existence of at least five proxies for tax avoidance, which are as follows: the effective tax rate, the discretionary tax avoidance, the book-tax difference, the unrecognized tax benefit and the use of shelter firms. The measurement of tax avoidance (*TaxAvoid*) used here is taken from the study by Atwood *et al.* (2012), who approached this phenomenon by using the effective tax rate as proxy. These scholars reported *TaxAvoid* as the difference between the home-country statutory corporate tax rate and the taxes actually paid. Data used in their calculation were taken from the Compustat Global Industrial/Commercial database for the period 1993 to 2007. The average tax avoidance rate among the countries included in the sample is 12.1 per cent (Appendix 3).

Independent variables

A set of three independent variables was used here to examine the hypotheses outlined above. Data were taken from the Global Competitiveness Report 2012-2013, which reports 99 different corporate indicators based on surveys with about 100 CEOs in each one of the 144 countries participating in the study (World Economic Forum, 2012). Data on the ethical behaviour of firms, which in the analysis is denoted as *EthicBehav*, were collected on the basis of the following statement: "In your country, how would you rate the corporate ethics of companies (ethical behaviour in the interaction with public officials, politicians and other firms)?" Answers were reported on a scale of 1-7, where 1 means extremely poor – among the worst in the world – and 7 means excellent – among the best in the world. The efficacy of corporate boards and investors (*EfficCorpBoard*) was reported through the following statement: "In your country, how would you characterize corporate governance by investors and boards of directors?" On a scale of 1-7, 1 means the management has little accountability to investors and boards, and 7 means the management is highly accountable to investors and boards. Finally, the strength of auditing standards (*StregthAudit*) was assessed as follows: "In your country, how strong are financial auditing and reporting standards?" On a scale of 1-7, 1 means extremely weak, and 7 means extremely strong.

Control variables

Control variables were introduced into the analysis to enhance the validity and reliability of the results. Data were taken from the seminal article on tax avoidance written by Atwood *et al.* (2012). These scholars published the first cross-national analysis on tax avoidance and made the data set available to encourage further studies of this type. All variables identified by Atwood *et al.* (2012) were included in this inquiry, as there is no valid reason to exclude or to select some of them. It should be noted that the labeling of these variables is kept as in the primary source to facilitate comparisons. In this study, these control variables were grouped into three categories, as they represent similar concepts, as follows: tax system characteristics, company characteristics and institutional factors.

Regarding the tax system characteristics, the general categorization proposed by Atwood *et al.* (2012) includes four variables, namely, book-tax conformity (*BTaxC*), worldwide approach (*WW*), tax enforcement (*TaxEnf*) and tax rate (*TaxRate*). *BTaxC* reports the discretional application of accounting rules to minimize the taxes paid in the home country, which results from creating differences between taxable income and pre-book taxable income. According to Atwood *et al.* (2012), lower values of *BTaxC*

suggest that firms choose not to engage in tax avoidance in the home country because the adoption of tax-planning strategies outside of the home country is more costly to implement. *WW* reports whether the tax law allows foreign subsidiaries' dividends to be tax-exempt in the country of the firm's headquarters. Atwood *et al.* (2012) took *WW* data from Ernst & Young's Worldwide Corporate Tax Guide and PricewaterhouseCoopers's Corporate Taxes: A Worldwide Summary. *WW* is coded with 1 when a country has a territorial approach and with 0 when there is a worldwide approach. A country has a territorial approach when at least 75 per cent of the foreign subsidiaries' dividends are exempt in the home country. According to Atwood *et al.* (2012), countries with a territorial approach are less likely to be involved in tax avoidance. *TaxEnf* describes the level of tax enforcement. Atwood *et al.* (2012) used tax evasion as the proxy to capture this phenomenon. Data were obtained from the 1996 World Competitiveness Report. Respondents gave their opinions on the extent of the tax evasion problem in their respective countries by indicating the level of agreement with the following statement, "Tax evasion is minimal in your country". A Likert scale of 1-6 was used to collect the answers, where 1 indicates strongly disagree, and 6 means strongly agree with the given statement. According to Atwood *et al.* (2012), in countries where tax evasion is lower, *TaxEnf* is higher. These scholars also suggested that in countries with higher *TaxEnf* there is lower probability of being involved in tax avoidance. *TaxRate* yields information about the statutory corporate tax rate. This measure averages the federal tax rate with the state and provincial tax rates to provide a more accurate approach to the total amount of tax that a firm is required to pay in each country. Atwood *et al.* (2012) gathered data on *TaxRate* from the KPMG LLP online summary, the PricewaterhouseCoopers LLP's online information and Coopers & Lybrand LLP's worldwide tax summary guides. According to Atwood *et al.* (2012), in countries with higher *TaxRate*, tax avoidance is also higher.

Regarding company characteristics, this analysis includes a set of nine variables, as follows: *EarnVol*, *BTaxC*, *Pre-TaxROA*, *LogSize*, *R&D*, *Leverage*, *SalesGrth*, *Multi* and *VarComp*. These concepts have been previously identified in the literature as determinants of tax avoidance and were used by Atwood *et al.* (2012) in their analysis. *EarnVol* measures the cross-sectional volatility in pre-tax earnings. *EarnVol* is calculated as the standard deviation of annual earnings per share over the whole sample period divided by the average total asset for the same period. *EarnVol* is used as a control of *BTaxC* to guarantee that earnings volatility do not affect *BTaxC* (Atwood *et al.*, 2012). *Pre-TaxROA* reports the firm's profitability. *Pre-TaxROA* results from dividing the pre-tax income by the average total assets. Higher values of *Pre-TaxROA* suggest higher levels of tax avoidance (Rego, 2003; Cazier *et al.*, 2009; Wilson, 2009). *LogSize* describes the size of the firm. *LogSize* is obtained as the natural logarithm of the total assets. Rego (2003) reported that when firms are larger (*LogSize*), there is less tax avoidance. *R&D* characterizes the expenditures in research and development that companies incur. *R&D* is calculated as the research and development expenditure divided by the total assets. It is expected that there is more tax avoidance when *R&D* is higher (Dyreng *et al.*, 2008). *Leverage* represents long-term obligations of the firms. *Leverage* is computed as total liabilities divided by total assets. Dyreng *et al.* (2008) suggested that tax avoidance is increased when *Leverage* levels are higher. *SalesGrth* shows the increase in sales over time. *SalesGrth* results from taking the average variation in

sales over a period of three years. According to Badertscher *et al.* (2009), firms with larger sales variations (*SalesGrth*) engage in tax avoidance more often than their counterparts. *Multi* indicates whether a company has operations abroad. *Multi* is given the value of 1 when foreign income taxes are observed, and 0 otherwise. Studies have shown that multinational firms (*Multi*) are less likely to be involved in tax avoidance (Hanlon *et al.*, 2007). *VarComp* reflects the incentives given to managers. *VarCamp* is based on the performance compensation given to managers (i.e. bonuses and stock-related compensation) divided by the total compensation. Atwood *et al.* (2012) gathered data on *VarComp* from a previous study by Towers Perrin (2005). Desai and Dharmapala (2006) and Hanlon *et al.* (2007) suggested that incentive compensations (*VarComp*) are associated with higher tax avoidance.

Finally, institutional factors regarding legal tradition, strength of investor rights and ownership concentration were also included in the analysis. To gather data on these issues, Atwood *et al.* (2012) used the index of legal protection (denoted as *Factor*) produced by La Porta *et al.* (1998), as it aggregates the concepts previously set out. According to Atwood *et al.* (2012), *Factor* is negatively associated with tax avoidance.

Results

Table I reports the results of the ordinary least squares regression. Model 1 presents the initial model after the inclusion of the set of independent variables studied here,

Variables	Hypothesis	Predicted	Dependent variable tax avoidance Model 1	Model 2
Independent variable				
EthicBehav	*H1*	Negative	−0.171 (0.030)**	−0.171 (0.025)***
EfficCorpBoard	*H2*	Negative	−0.520 (0.077)**	−0.519 (0.054)***
StregthAudit	*H3*	Negative	0.404 (0.056)**	0.404 (0.045)***
Control variable				
BTaxC			−0.196 (0.051)*	−0.196 (0.042)**
WW			−0.090 (0.025)*	−0.090 (0.016)**
TaxEnf			0.000 (0.023)	
TaxRate			0.799 (0.247)*	0.801 (0.169)**
VarComp			0.327 (0.056)**	0.328 (0.040)***
EarnVol			−0.442 (0.046)**	−0.442 (0.037)***
Pre-TaxROA			0.290 (0.980)	0.296 (0.490)**
LogSize			−0.144 (0.027)**	−0.144 (0.019)***
R&D			0.241 (7.175)**	0.248 (5.802)***
Leverage			0.410 (0.173)	0.411 (0.140)*
SalesGrth			0.387 (0.038)	0.385 (0.037)*
Multi			−0.142 (0.032)**	−0.142 (0.026)**
Factor			−0.164 (0.021)**	−0.164 (0.017)***
Constant			3.813 (0.493)**	3.812 (0.401)**
Adjusted R^2			0.940	0.960
Observations			22	22
F			18.366*	29.078***

Notes: *, **, *** indicate significance at 10, 5 and 1%, respectively; the table shows beta coefficients, standard errors in parentheses and significance

Table I.
Results of ordinary last squares regression on the nature of tax avoidance

and Model 2 offers a new model after backward elimination of non-significant variables.

The results for Model 1 reveal that the variables added to the model specified by Atwood *et al.* (2012) are significant and contribute to explaining tax avoidance within the countries studied. As expected in *H1*, Model 1 shows that the more ethical the behaviour a firm displays (*EthicBehav*), the less probable the firm will be involved in tax avoidance. This result is consistent with previous research showing that the CEO's ethical attitude is important in guiding the behaviour of the firm (Hilary and Hui, 2009; Kumar *et al.*, 2011). In *H2*, it was posited that the efficacy of the corporate board and investors in demanding management accountability (*EfficCorpBoard*) is important in reducing tax avoidance. This prediction was confirmed with the data. The signal of the coefficient was as predicted, and the size of the coefficient was large (−0.520). This result shows consistency with the recent evidence provided by Khurana and Moser (2013) and Lanis and Richardson (2011, 2012) in the specific case of corporate boards, and with Hanlon and Slemrod (2009) in the case of investors. The results obtained for *H3* were not as expected. It was predicted that the stronger the accounting/auditing reports (*StregthAudit*), the less tax avoidance would be observed. However, Model 1 revealed that this relation was positive and relatively strong, considering the size of the coefficient (0.404). This implies that firms that rely on the standards of accounting/auditing firms are more likely to be involved in tax avoidance. A layperson might expect accounting/auditing companies to prevent the emerging of tax avoidance, but the findings of this study suggest that these firms are perhaps behind the adoption of this schema. Despite the divergent result obtained for *H3*, the study conducted by Armstrong *et al.* (2011) confirmed this tendency, as did the inquiry based on the legal evidence recently published by Sikka and Willmott (2013). This denotes that one cannot assume that auditing firms go along with tax regulations, as McBarnet (2004, 2007) suggested. However, this is an issue that needs more investigation, as it indicates creative compliance with tax regulations.

As for the control variables included in this study and reported in Atwood *et al.* (2012), Model 1 revealed that four variables (*TaxEnf*, *Pre-TaxROA*, *Leverage* and *SalesGrth*) were not considered significant in the model specification initially suggested. After applying the backward elimination of the non-significant variables, Model 2 was obtained. In this new model, only *TaxEnf* was excluded, whereas *Pre-TaxROA*, *Leverage* and *SalesGrth* were included with the same signals and similar coefficients to the ones obtained by Atwood *et al.* (2012). An examination of the Pearson coefficients suggests that there was no significant relation between the variables included in the model (Appendix 4). However, this is an issue that requires further evaluation (see Robustness, below).

As for the remaining set of control variables, the overall results reported in Model 2 show that the variables used in the analysis follow a tendency similar to the one reported by Atwood *et al.* (2012). Tax avoidance increases when *Leverage* levels are higher, as claimed by Dyreng *et al.* (2008); whenvariations in sales (*SalesGrth*) are greater (Badertscher *et al.*, 2009); when *R&D* is higher (Dyreng *et al.*, 2008); when incentive compensation (*VarComp*) is given to managers (Desai and Dharmapala, 2006; Hanlon *et al.*, 2007; Minnick and Noga, 2010; Phillips, 2003); and when *TaxRate* is higher (Atwood *et al.*, 2012). On the contrary, tax avoidance decreases when the

size of the company (*LogSize*) is larger, as reported by Rego (2003); when the country has a strong legal tradition (*Factor*; Atwood *et al.*, 2012); when the firm has multinational operations (*Multi*; Hanlon *et al.*, 2007) and a worldwide approach (*WW;* Atwood *et al.*, 2012); and when the book-tax conformity is low (*BTaxC*; Atwood *et al.*, 2012).

Robustness

To assess the quality of Model 2, two additional tests were performed. First, a collinearity test was conducted to examine whether the concepts evaluated represent different dimensions. The results indicate that the tolerance levels of the independent variables were large (superior to 0.10), and the inflation factor was inferior to 2 (data not shown, but available upon request). This suggests that the predictors cannot be explained by other predictors and that the standard errors are not inflated. The additional examination of the eigenvalues and condition index reported values different from zero and lower than 15, respectively. This result confirmed that multicollinearity is not an issue. Therefore, the overall collinearity test suggests that the variables included in the analysis are not redundant. Second, an evaluation of the possible interaction between *TaxEnf* and the three independent variables included in this study (*EthicBehav*, *EfficCorpBoard* and *StregthAudit*) was performed, taking into consideration that after the inclusion of these variables, *TaxEnf* appears to be insignificant. Three interactions were particularly tested: *TaxEnf* × *EthicBehav*, *TaxEnf* × *EfficCorpBoard* and *TaxEnf* × *StregthAudit*. After the inclusion of these new variables, the results of the regression analysis (data not shown, but available upon request) revealed that the interaction terms did not appear significant in the model. A further examination of the Pearson correlation coefficients of these variables (*EthicBehav* and *TaxEnf* 0.539, *EfficCorpBoard* and *TaxEnf* 0.550 and *StregthAudit* and *TaxEnf* 0.507; data taken from Appendix 4) revealed that although they are related, there is no strong relationship among them. In sum, the interaction effects do not alter the estimates of the main effects, thus suggesting that Model 2 should be considered the final model.

Conclusions

This article explored whether the top leadership of the organizations can contribute to curbing tax avoidance worldwide. The results reported in this research reveal that the scrutiny brought to bear by the board of directors and investors seems to be rather effective in reducing tax avoidance worldwide. It is reasonable that the owners of the capital expect real results of the operation of their corporations, rather than inflated reports based on legal manipulation. This result may be of interest for public officials and international organizations involved in delineating policies to control this phenomenon. Because tax avoidance creates immunity from legal control, the reported results offer an alternative path to explore. Possibly, a less involvement of accounting/auditing firms would be wise to consider when these organizations play an active role in promoting tax avoidance worldwide, as this inquiry has shown.

References

Armstrong, C.S., Blouin, J.L. and Larcker, D.F. (2011), "The incentives for tax planning", *Journal of Accounting and Economics*, Vol. 53 Nos 1/2, pp. 391-441.

Atwood, T.K., Drake, M.S., Myers, J.N. and Myers, L.A. (2012), "Home country tax system characteristics and corporate tax avoidance: international evidence", *The Accounting Review*, Vol. 87 No. 6, pp. 1831-1860.

Badertscher, B., Katz, S. and Rego, S.O. (2009), "The impact of private equity ownership on portfolio firms' corporate tax avoidance", Working Paper, Harvard Business School.

Bamber, L.S., Jiang, J. and Want, I.Y. (2010), "What's my style? The influence of top managers on voluntary corporate financial disclosure", *The Accounting Review*, Vol. 85 No. 4, pp. 1131-1162.

Bartelsman, E.J. and Beetsma, R.M.W.J. (2003), "Why pay more? Corporate tax avoidance through transfer pricing in OECD countries", *Journal of Public Economics*, Vol. 87 Nos 9/10, pp. 2225-2252.

Boone, J.P., Khurana, I.K. and Raman, K.K. (2013), "Religiosity and tax avoidance", *Journal of the American Taxation Association*, Vol. 35 No. 1, pp. 53-84.

Cazier, R.A., Rego, S.O., Tian, X. and Wilson, R.J. (2009), "Early evidence on the determinants of unrecognized tax benefits", Working Paper, University of Iowa.

Chen, S., Chen, X., Cheng, Q. and Shevlin, T. (2010), "Are family firms more tax aggressive than non-family firms?", *Journal of Financial Economics*, Vol. 95 No. 1, pp. 41-61.

Chyz, J. (2013), "Personally tax aggressive executives and corporate tax sheltering", *Journal of Accounting and Economics*, Vol. 56 Nos 2/3, pp. 311-328.

Committee of Public Accounts (2012), "Oral evidence", available at: www.parliament.uk/business/committees/committees-a-z/commons-select/public-accounts-committee/publications/previous-sessions/ (accessed 2 May 2014).

Desai, M. and Dharmapala, D. (2006), "Corporate tax avoidance and high-powered incentives", *Journal of Financial Economics*, Vol. 79 No. 1, pp. 145-179.

Desai, M. and Dharmapala, D. (2009), "Corporate tax avoidance and firm value", *Review of Economics and Statistics*, Vol. 91 No. 3, pp. 537-546.

Dharmapala, D. and Hines, J. (2009), "Which countries become tax havens?", *Journal of Public Economics*, Vol. 93 Nos 9/10, pp. 1058-1068.

Dharmapala, D. and Riedel, N. (2011), "Earnings shocks and tax-motivated income-shifting: evidence from European multinationals", *Journal of Public Economics*, Vol. 97 No. 1, pp. 95-107.

Dyreng, S., Hanlon, M. and Maydew, E. (2008), "Long-run corporate tax avoidance", *The Accounting Review*, Vol. 83 No. 1, pp. 61-82.

Dyreng, S., Hanlon, M. and Maydew, E. (2010), "The effects of executives on corporate tax avoidance", *The Accounting Review*, Vol. 85 No. 4, pp. 1163-1189.

Dyreng, S. and Lindsey, B. (2009), "Using financial accounting data to examine the effect of foreign operations located in tax havens and other countries on US multinational firms' tax rates", *Journal of Accounting Research*, Vol. 47 No. 5, pp. 1238-1316.

Faulkender, M. and Petersen, M. (2012), "Investment and capital constraints: repatriations under the American Jobs Creation Act", *Review of Financial Studies*, Vol. 25 No. 11, pp. 3351-3388.

Friedman, M. (1970), "The social responsibility of business is to increase its profits", *The New York Times Magazine*, 13 September.

Frischmann, P., Shevlin, T. and Wilson, R. (2008), "Economic consequences of increasing the conformity in accounting for uncertain tax benefits", *Journal of Accounting and Economics*, Vol. 46 Nos 2/3, pp. 261-278.

Garsten, C. and Hernes, T. (2009), *Ethical Dilemmas in Management*, Routledge, London.

Gleason, C. and Mills, L. (2011), "Do auditor-provided tax services improve the estimate of tax reserves?", *Contemporary Accounting Research*, Vol. 28 No. 5, pp. 1484-1509.

Hanlon, M. and Heitzman, S. (2010), "Long-run corporate tax avoidance", *Journal of Accounting and Economics*, Vol. 50 Nos 1/2, pp. 127-178.

Hanlon, M., Mills, L. and Slemrod, J. (2007), "An empirical examination of corporate noncompliance", in Auerbach, A.J., Hines, J.R. Jr. and Slemrod, J. (Eds), *Taxing Corporate Income in the 21st Century*, Cambridge University Press, Cambridge, pp. 171-210.

Hanlon, M. and Slemrod, J. (2009), "What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement", *Journal of Public Economics*, Vol. 93 Nos 1/2, pp. 126-141.

Hilary, G. and Hui, K. (2009), "Does religion matter in corporate decision making in America?", *Journal of Financial Economics*, Vol. 93 No. 3, pp. 455-473.

Hope, O.-K., Ma, M. and Wayne, T. (2013), "Tax avoidance and geographic earnings disclosure", *Journal of Accounting and Economics*, Vol. 56 Nos 2/3, pp. 170-189.

Khurana, I.K. and Moser, W.J. (2013), "Institutional shareholders' investment horizons and tax avoidance", *Journal of the American Taxation Association*, Vol. 35 No. 1, pp. 111-134.

Kumar, A., Page, J. and Spalt, O. (2011), "Religious beliefs, gambling attitudes, and financial market outcomes", *Journal of Financial Economics*, Vol. 102 No. 3, pp. 671-708.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W. (1998), "Law and finance", *Journal of Political Economy*, Vol. 106 No. 6, pp. 1113-1155.

Lanis, R. and Richardson, G. (2011), "The effect of board of director composition on corporate tax aggressiveness", *Journal of Accounting and Public Policy*, Vol. 30 No. 1, pp. 50-70.

Lanis, R. and Richardson, G. (2012), "Corporate social responsibility and tax aggressiveness: an empirical analysis", *Journal of Accounting and Public Policy*, Vol. 31 No. 1, pp. 86-108.

Lieberman, E.S. (2005), "Nested analysis as mixed-method strategy for comparative research", *American Political Science Review*, Vol. 99 No. 3, pp. 435-452.

McBarnet, D. (2004), *Crime, Compliance and Control*, Ashgate Publishing, Burlington, VA.

McBarnet, D. (2007), "Corporate social responsibility beyond the law, through law, for law: the new corporate accountability", in McBarnet, D., Voiculescu, A. and Campbell, T. (Eds), *The New Corporate Accountability*, Cambridge University Press, Cambridge, pp. 9-56.

Minnick, K. and Noga, T. (2010), "Do corporate governance characteristics influence tax management?", *Journal of Corporate Finance*, Vol. 16 No. 5, pp. 703-718.

Parker, C. and Nielsen, V.L. (2011), *Explaining Compliance: Business Responses to Regulation*, Edward Elgar, Cheltenham.

Phillips, J.D. (2003), "Tax avoidance and geographic earnings disclosure", *The Accounting Review*, Vol. 78 No. 3, pp. 847-874.

Rego, S.O. (2003), "Tax-avoidance activities of US multinational corporations", *Contemporary Accounting Research*, Vol. 20 No. 4, pp. 805-833.

Schafer, W.E. and Simmons, R.S. (2008), "Social responsibility, Machiavellianism and tax avoidance. A study of Hong Kong tax professionals", *Accounting, Auditing & Accountability Journal*, Vol. 21 No. 5, pp. 695-720.

Sikka, P. and Willmott, H. (2013), "The tax avoidance industry: accountancy firms on the make", *Critical Perspectives on International Business*, Vol. 9 No. 4, pp. 415-443.

Stiglitz, J. (1985), "The general theory of tax avoidance", *National Tax Journal*, Vol. 38 No. 3, pp. 325-338.

Taylor, G. and Richardson, G. (2012), "International corporate tax avoidance practices: evidence from Australian firms", *International Journal of Accounting*, Vol. 47 No. 4, pp. 469-496.

Towers Perrin (2005), *Managing Global Pay and Benefits: Worldwide Total Remuneration Report 2005-2006*, Towers Perrin, Philadelphia, PA.

Wilson, R. (2009), "An examination of corporate tax shelter participants", *The Accounting Review*, Vol. 84 No. 2, pp. 969-999.

World Bank (2014), "How we classify countries", available at: http://data.worldbank.org/about/country-classifications (accessed 26 April 2014).

World Economic Forum (2012), *The Global Competitiveness Report 2012-2013*, SRO-Kundig, Geneva.

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Appendix 1

Income level[a]	Countries
High income	Australia, Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, Singapore, Spain, Sweden, Switzerland, UK, USA and the region of Hong Kong
Medium income	Brazil, Malaysia, Mexico, South Africa, South Korea and Taiwan
Low income	India

Note: [a] Classification based on GNI per capital, Atlas method
Source: World Bank (2014)

Table AI. List of countries included in the analysis

Appendix 2

Table AII. Definitions of variables and descriptive statistics

Variable	Definition	Scale	Source
TaxAvoid	Tax avoidance	Continuous. Higher values indicate greater differences between pre-tax earnings at home country statutory tax rate and current taxes paid	A
EthicBehav	Ethical behavior of firms	1–7. Higher values indicate more ethical behavior	B
EfficCorpBoard	Efficacy of corporate boards and investors	1–7. Higher values indicate high management accountability	B
StregthAudit	Strength of auditing and reporting standards	1–7. Higher values indicate high standards	B
BTaxC	Book-tax conformity	Continuous. Higher values indicate less flexibility in the reporting of taxable income	A
WW	Worldwide approach	0–1. 0 = Territorial approach 1 = Worldwide approach	A
TaxEnf	Tax enforcement	1–6. Higher values indicate less tax evasion	A
TaxRate	Statutory corporate tax rate	Continuous. Average of federal, state and provincial income tax rates	A
VarComp	Management incentives	Continuous. Higher values indicate higher performance-based compensation	A
EarnVol	Earnings volatility	Continuous. Higher values indicate great variance in pre-tax earnings	A
Pre-TaxROA	Pre-tax return on assets	Continuous. Higher values indicate greater profitability on assets	A
LogSize	Size of the firms	(ln) Total assets	A
R&D	Research and development	Continuous. Higher values indicate intensive investment in research and development	A
Leverage	Leverage level	Continuous. Higher values indicate greater long-term liabilities	A
SalesGrth	Sales growth	Continuous. Higher values indicate greater changes in annual sales	A
Multi	Firms with multinational operations	0–1. 0 = Foreign income taxes 1 = Otherwise	A
Factor	Index of legal protection	Continuous. Higher values indicate favorable legislation for the firms	A

Sources: A: Atwood *et al.* (2012); B: World Economic Forum (2012)

Appendix 3

Variable	*N*	Mean	SD
TaxAvoid	22	0.121	0.064
EthicBehav	22	5.068	0.921
EfficCorpBoard	22	5.100	0.565
StregthAudit	22	5.450	0.641
BTaxC	22	0.481	0.297
WW	22	0.500	0.511
TaxEnf	22	3.456	1.041
TaxRate	22	0.326	0.068
VarComp	22	0.384	0.130
EarnVol	22	0.505	0.261
Pre-TaxROA	22	0.093	0.022
LogSize	22	6.103	0.670
R&D	22	0.001	0.002
Leverage	22	0.174	0.066
SalesGrth	22	0.122	0.036
Multi	22	0.090	0.294
Factor	22	0.703	1.167

Table AIII.
Descriptive statistics

Appendix 4

Table AIV.
Pearson correlation coefficients

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. *TaxAvoid*																
2. *EthicBehav*	−0.450															
3. *EfficCorpBoard*	−0.222	0.789														
4. *StregthAudit*	−0.134	0.716	0.817													
5. *BTaxC*	−0.573	0.146	−0.145	−0.166												
6. *WW*	0.277	−0.560	−0.362	−0.254	−0.342											
7. *TaxEvf*	−0.485	0.539	0.550	0.507	0.237	−0.217										
8. *TaxRate*	0.239	−0.248	−0.110	−0.218	−0.574	0.206	−0.439									
9. *VarComp*	0.135	0.113	0.216	0.198	−0.083	−0.200	0.227	0.132								
10. *EarnVol*	−0.587	0.018	−0.262	−0.325	0.700	−0.279	0.107	−0.116	0.143							
11. *Pre-TaxROA*	0.590	−0.296	0.144	0.251	−0.644	0.433	−0.272	0.117	0.056	−0.765						
12. *LogSize*	0.187	−0.509	−0.539	−0.476	−0.034	0.159	−0.528	0.339	0.049	0.177	0.086					
13. *R&D*	0.092	−0.136	−0.253	−0.146	0.179	0.337	−0.024	−0.256	−0.262	−0.070	−0.086	−0.158				
14. *Leverage*	0.238	−0.209	−0.369	−0.422	−0.232	−0.064	−0.250	0.383	0.144	−0.074	0.119	0.469	−0.455			
15. *SalesGrth*	0.611	−0.565	−0.382	−0.296	−0.409	0.277	−0.235	0.032	−0.124	−0.403	0.619	0.134	−0.014	0.427		
16. *Multi*	−0.315	0.222	0.086	0.252	0.225	0.000	0.360	−0.445	−0.126	−0.065	0.012	−0.093	−0.107	−0.079	−0.205	
17. *Factor*	−0.108	0.326	0.414	0.447	−0.087	0.125	0.605	−0.188	0.141	−0.269	0.317	−0.394	−0.029	−0.138	0.073	0.346