7-2018

Cross-country evidence on the role of independent media in constraining corporate tax aggressiveness

Kiridaran KANAGARETNAM
York University

Jimmy LEE
Singapore Management University, jimmylee@smu.edu.sg

Chee Yeow LIM
Singapore Management University, cheeyeowlim@smu.edu.sg

Gerald J. LOBO
University of Houston

DOI: https://doi.org/10.1007/s10551-016-3168-9

Cross-Country Evidence on the Role of Independent Media in Constraining Corporate Tax Aggressiveness*

Kiridaran Kanagaretnam
Schulich School of Business
York University
KKanagaretnam@schulich.yorku.ca

Jimmy Lee
School of Accountancy
Singapore Management University
jimmylee@smu.edu.sg

Chee Yeow Lim
School of Accountancy
Singapore Management University
cheeyeowlim@smu.edu.sg

Gerald J. Lobo
C.T. Bauer College of Business
University of Houston
gjlobo@uh.edu

March 2016

Published advanced online in Journal of Business Ethics, 2016 April
http://dx.doi.org/10.1007/s10551-016-3168-9

* We thank Travis Chow, Amin Mawani, Sugata Roychowdhury and seminar participants at York University for their helpful suggestions. Kanagaretnam and Lobo thank the Social Sciences and Humanities Research Council of Canada (SSHRC) for financial support. Lee and Lim thank the School of Accountancy Research Center (SOAR) at Singapore Management University for financial support.

Cross-Country Evidence on the Role of Independent Media in Constraining Corporate Tax Aggressiveness

Abstract

Using an international sample of firms from 32 countries, we study the relation between media independence and corporate tax aggressiveness. We measure media independence by the extent of private ownership and competition in the media industry. Using an indicator variable for tax aggressiveness when the firm's corporate tax avoidance measure is within the top quartile of each country-industry combination, we find strong evidence that media independence is associated with a lower likelihood of tax aggressiveness, after controlling for other institutional determinants, including home-country tax system characteristics. We also find that the effect of media independence is more pronounced when the legal environment is weaker, and when the information environment is less transparent.

Keywords: Tax Aggressiveness; Tax Systems; Media Independence; CSR; Business Ethics

Cross-Country Evidence on the Role of Independent Media in Constraining Corporate Tax Aggressiveness

1. Introduction

The media have recently reported many incidences of corporate tax avoidance, a highly controversial practice, by firms around the world.[1] This focus on corporate tax avoidance is not confined only to developed economies, but is also prevalent in emerging economies.[2] Anecdotal evidence indicates that media exposure of corporate tax avoidance activities can lead to firms being pressured to pay additional taxes. For example, in a widely-publicized case in 2013, Starbucks voluntarily paid £10 million in corporate income taxes to the U.K. government in response to a public backlash from media reports of tax avoidance and subsequent investigation by members of the U.K. Parliament.[3] Such media exposure of tax avoidance and associated efforts to "shame" these practices can act as a deterrent for corporate tax avoidance, beyond legal institutions such as tax enforcement. Given the prevalence of corporate tax avoidance and the anecdotal evidence on the media's role in curtailing such behavior, we study the effects of media independence on corporate tax aggressiveness for a sample of firms from 32 countries around the world.[4]

According to World Bank Institute (2002), "as important providers of information, the media are more likely to promote better economic performance when they are more likely to

[1] These include but are not limited to editorials in leading news outlets such as Bloomberg's "The Great Corporate Tax Dodge," the *New York Times*' "But Nobody Pays That," *The Times*' "Secrets of Tax Avoiders," and the *Guardian*'s "Tax Gap."

[2] For example, a recent report by Confederation of Indian Industry (CII) and global services firm Ernst & Young (EY) indicates that countries like India and China are looking at tax base erosion.

[3] A Starbucks spokesperson said "We listened to our customers in December and so decided to *forgo* certain deductions which would make us liable to pay £10m in corporation tax this year and a further £10m in 2014 (emphasis added)," which suggests that Starbucks was not convicted of any tax wrongdoing but voluntarily paid additional taxes. Interestingly, this was Starbucks' first tax payment in five years, since 2009.

[4] In this paper, we follow Hanlon and Heitzman (2010) and define tax avoidance broadly as the reduction in explicit taxes paid. Hanlon and Heitzman (2010) state that "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. Therefore, we define tax aggressiveness as tax planning strategies at the more aggressive end of the tax avoidance spectrum that are more likely to push the envelope of tax law, and to include the more aggressive tax-related activities that the media presumably are more concerned about in their coverage.

satisfy three conditions: the media are independent, the media provide good-quality information, and the media have a broad reach." Following this World Bank Institute report, our main focus is on the effects of the independent media on corporate tax aggressiveness. We reason that an independent media, where journalists have incentives to investigate and uncover stories on wrongdoing, is better able to monitor corporate tax aggressiveness. Following prior literature (Djankov et al. 2003; Gentzkow and Shapiro 2006; Houston et al. 2011), we measure media independence as the extent of private ownership and competition in the media industry. Djankov et al. (2003) note that the media are less likely to deliver complete and unbiased news when they are more tightly controlled by the government.[5] Another important factor that influences the media's effectiveness at monitoring and reporting independently is competition. Djankov et al. (2003) indicate that higher levels of competition facilitate the reporting of unbiased and accurate information. Gentzkow and Shapiro (2006) argue that in a competitive environment, media firms have stronger incentives to identify and report on issues of interest and "newsworthy events" in order to differentiate themselves from their competitors, and thus to increase their revenues.

We argue that corporate tax aggressiveness is one such "newsworthy event" that independent media firms can use to achieve differentiation and thus have incentives to report on.[6] While corporate tax avoidance produces substantial tax savings that are beneficial to the firm's shareholders and senior management,[7] tax avoidance is generally considered as exploiting the complexities, technicalities and loopholes in the tax laws (Dowling 2014).

[5] Although state owned media may have higher incentives to expose tax avoidance practices, prior literature shows that state ownership of media is associated with higher corruption, thus reducing or completely reversing these incentives (Houston et al. 2011).

[6] Within two days of announcement of the merger between Pfizer and Allergen, The New York Times carried an editorial headlined, "Pfizer's Big Tax Avoidance Play" (The New York Times, November 24, 2015). In it the editorial states, "This merger is a tax-dodging maneuver that enriches shareholders and executives while short changing the public and robbing the Treasury …". This is an example of tax aggressive activities becoming headline grabbing newsworthy events in major media outlets.

[7] Potential savings from aggressive tax avoidance strategies can be economically large (Scholes et al. 2014). For example, Bloomberg News reports that Google avoided $2 billion in worldwide income taxes in 2011 by channeling $10 billion of revenue into a Bermuda shell company.

Based on social norm theory, corporate tax avoidance is not considered to be right and just from a general public point of view because it imposes costs on the government and society at-large (Elster 1989; Dowling 2014). In particular, under this view, firms are expected to pay their "fair share" of tax on their profits to the State.[8] In essence, this view is societal in nature. Christensen and Murphy (2004) and Christensen (2011) argue that the payment of corporate tax is the area where corporate citizenship is most tangible and most important. Recent business ethics literature frames tax avoidance practices as negative CSR and, as such, socially irresponsible (Preuss 2012; Lanis and Richardson 2014). Given the potential societal impact and the controversial aspect of corporate tax avoidance, reporting on tax avoidance makes a compelling news story that independent media firms have incentives to uncover and monitor.

We posit that the independent media could play an important monitoring role in constraining tax aggressive practices by having an impact on both the expected direct and indirect costs of corporate tax avoidance. In particular, the exposure of tax aggressive activities by the independent media can attract scrutiny from tax and regulatory authorities, which increases the probability of detection and enforcement, and subsequently opens the door for potentially large direct costs such as litigation and other costs incurred in mounting a defense against tax authorities, back taxes, interest, fines and penalties, and more rigorous scrutiny from tax authorities in the long-run (e.g., being blacklisted by the tax authorities).[9]

In addition, exposure by the independent media imposes indirect costs such as reputational damage to the firm and its managers. In a recent study based on a survey of nearly 600 corporate tax executives, Graham et al. (2014) document that the potential for an

[8] Dowling (2014) characterizes the fair share of tax as the statutory tax rate times a reasonable estimate of the firm's taxable profits (that is, tax base).

[9] Anecdotal and empirical evidence indicates that the direct costs alone can be quite substantial. For example, in 14 cases of tax sheltering, Wilson (2009) finds that the interest charges paid by firms to tax authorities amounted to 40% of the tax savings originally generated by the tax shelter transactions. Graham and Tucker (2006) report the case of GlaxoSmithKline P.L.C. in 2004, which owes the IRS $5.2 billion in back taxes and penalties related to a transfer pricing strategy dating back to 1989.

adverse effect on company reputation significantly constrains firms' incentives to engage in tax planning strategies, with 69% of their survey respondents, including 72% of publicly traded respondents, indicating that reputation concerns are 'important' or 'very important.' Additionally, "risk of adverse media attention" was flagged as one of the important or very important factors that could restrain corporate tax avoidance activities. Graham et al. also document a positive association between reputational concerns and higher long-run cash effective tax rates and lower probabilities of engaging in tax shelters, which indicate that reputational concerns are associated with lower incentives for tax planning. Consistent with Graham et al.'s findings, other recent practitioner surveys (e.g., EY 2014; PwC 2014) also report that firms are significantly concerned about negative media coverage and the repercussions that follow, which could possibly include customer boycotts and reputational damage. For instance, EY (2014) documents in their survey of tax and finance executives of global companies that 89% of the largest companies are somewhat or significantly concerned about the media coverage of the taxes some companies are paying or their seemingly low effective tax rates.[10] Hanlon and Slemrod (2009) also note that firms engaging in tax sheltering activities are often labeled as "poor corporate citizens." The findings of these studies indicate that media coverage of tax aggressiveness can impose substantial reputational costs on the firm and its managers.

On the other hand, Gallemore et al. (2014) find limited evidence of negative reputational consequences, such as increased executive or auditor turnover, in their examination of whether firms or their top executives face significant reputation costs for engaging in tax sheltering activities. Also, despite negative media coverage of controversial tax practices, many large corporations continue to avoid taxes, which suggests that negative

[10] Supporting this notion, Austin and Wilson (2015) find evidence that firms with valuable customer brands engage in lower levels of tax avoidance, due to the threat of reputational damages associated with tax avoidance. In an experimental study, Hardeck and Hertl (2014) also document that media coverage of aggressive corporate tax strategies can affect corporate reputation, and consumers punish tax aggressive companies by lowering their willingness to pay for companies' products.

media coverage may have only limited influence on corporate tax aggressiveness.[11] The conflicting results of these prior studies indicate that whether media independence is associated with lower corporate tax aggressiveness is an unanswered question that calls for further empirical examination.

We examine the relation between media independence and corporate tax aggressiveness using a large sample of 86,212 firm-year observations from 32 countries spanning the years 1995 to 2007. We use private media ownership and media industry competition as proxies for media independence. Specifically, using the information on private media ownership and media industry competition from Djankov et al. (2003), we measure the extent of private media ownership using the market share of viewership of private television stations, and the extent of media competition, using the aggregate market share of television stations and daily newspapers.

We follow prior research (e.g., Hanlon and Heitzman 2010; Atwood et al. 2012) and define corporate tax avoidance broadly as the reduction in explicit taxes paid, and measure tax avoidance as the difference between the firm's "unmanaged tax amount" (the home-country statutory corporate tax rate times pre-tax earnings before exceptional items) and its "managed tax amount" (current taxes paid). This difference reflects how managers pursue strategies that reduce taxes paid. This definition is also consistent with the characterization of fair share of tax in Dowling (2014), where fair share is defined as the statutory rate of tax at the time on a reasonable estimate of the company's taxable profit. Thus, our measure of corporate tax avoidance represents the deviations from the fair share of tax payable. To capture tax aggressiveness, we use an indicator variable that equals one if the country-industry tax avoidance is within the top quartile of each country-industry combination, and

[11] For instance, Citizens for Tax Justice reported in February 2012 on General Electric's low tax rate of two percent over ten years. Despite this negative coverage, General Electric continues to be among the top tax avoiders in another study published in October 2015 ("The use of offshore tax havens by Fortune 500 companies").

zero otherwise. This measure attempts to capture the more aggressive tax-related activities that the media presumably are more interested in covering and thus is more closely related to our research question.[12]

Based on logistic estimation, we find strong evidence that media independence is negatively associated with the likelihood of corporate tax aggressiveness. This effect is also economically significant. After controlling for home country tax system characteristics, a one standard deviation increase in media independence is associated with a 3.7% to 10.3% decrease in the likelihood of tax aggressiveness across various measures of media independence. This suggests that media independence plays an important role in mitigating the likelihood of tax aggressiveness, over and above the effects of formal institutions such as home country tax system characteristics (e.g., Atwood et al. 2012).

In additional analyses, we explore whether legal institutions and information environment accentuate or attenuate the role of media independence in mitigating the likelihood of corporate tax aggressiveness. We find that the independent media play a smaller, more diminished role when the legal environment is stronger and when the information environment is more transparent. Finally, we find that the effect of media independence is accentuated when the expected reputational costs are higher, i.e., when the media audience is more educated.

Our study provides several important contributions to the literature. First, we contribute to the literature investigating cross-country determinants of tax aggressiveness. Atwood et al. (2012) find that tax avoidance across countries is associated with the strength of formal institutions, such as required book-tax conformity, worldwide versus territorial approach, and perceived strength of enforcement. We show that media independence also affects tax aggressiveness, after explicitly controlling for the tax system characteristics

[12] Lanis and Richardson (2014) employ an alternate measure of tax avoidance based on firm tax disputes, in the U.S. This measure is difficult to implement, since our sample covers 32 countries.

studied in Atwood et al. (2012). We also document that media independence plays a more important monitoring role when the legal environment is weaker and when the information environment is less transparent.

Second, we contribute to the recent ethics literature that examines the effects of firm reputation on corporate tax avoidance and CSR activities. Hardeck and Hertl (2014) show, in an experimental study, that aggressive corporate tax strategies (CTSs) have a negative effect on corporate reputation and purchase intention, whereas responsible CTSs have a positive effect. We contribute to the literature on CTSs and corporate reputation by introducing the role of the media in the process. Additionally, recent literature has raised concerns about CSR practices of firms domiciled in tax havens (Preuss 2012). Our results highlight the potential for the independent media to expose such firms.

Third, we extend the emerging literature on the economic role of the independent media. This literature highlights the potential monitoring role of the media, which is frequently viewed as one of its most important functions (e.g., Djankov et al. 2003).[13] For example, Brunetti and Weder (2003) find that a free press works to reduce overall country-level corruption and, in the banking context, Houston et al. (2011) document that media independence is associated with lower corruption in bank lending. We contribute to this literature and the business ethics literature by documenting the effects of media independence in constraining corporate tax aggressiveness.

The rest of this paper is organized as follows. We discuss related research on the role of the independent media on firm behavior and develop our predictions on the effects of media independence on corporate tax aggressiveness in the next section. We present the measures of our primary variables of interest and our research design in section three, discuss

[13] The importance of a private and competitive media is widely recognized; it is often called ‘‘the fourth estate,’’ along with the executive, the legislature, and the courts (Djankov et al. 2003).

the main results in section four, report the results of additional analyses and robustness checks in section five, and provide our conclusions in section six.

2. Research Background and Hypotheses

2.1 Role of the Independent Media in Firm Behavior

In the context of corporate tax aggressiveness, our main focus is on the possible monitoring role of the independent media. The monitoring role of the media comprises two functions: dissemination of news the public should know, including information about corporate taxation and tax avoidance practices, and independent investigation of the actions of decision makers, including managers, external advisors, tax regulators, and governments. Another role of the media that is relevant for our research is agenda setting. As an agenda setter, the media inform both the public and governments about new developments at home and abroad, such as emerging strategies of tax evasion (Reuters 2012). Additionally, the media can keep the issues in the forefront by repeating the news with follow-up articles. Consistent with prior literature (Djankov et al. 2003; Gentzkow and Shapiro 2006; Houston et al. 2011), we measure media independence by the extent of private ownership and competition in the media industry, and rely on prior evidence showing that media independence enhances the agenda-setting and the monitoring roles of the media.

In general, an independent media, in its monitoring role, helps to enhance transparency, promote accountability of public officials, and reduce corruption (Brunetti and Weder 2003; Djankov et al. 2003; Leeson 2008; Coronel 2010; Houston et al. 2011; Chen et al. 2013). Brunetti and Weder (2003) find that a free press works to reduce overall country-level corruption. Specifically in the banking context, Houston et al. (2011) document that media independence is associated with lower corruption in bank lending. Chen et al. (2013) examine the relation between media independence, as characterized by lower state ownership and competition, and audit quality. They document that auditors have a higher propensity to

issue modified opinions in countries with a more independent media. The findings of these studies highlight how media independence can increase transparency and shed more light on bank and audit practices.

2.2 Media Independence and Corporate Tax Aggressiveness

Building on prior research, we posit that media independence can play an important monitoring role in constraining corporate tax aggressiveness. Corporate tax aggressiveness is generally considered as exploiting the complexities, technicalities, and loopholes in the tax laws to maximize tax savings (Dowling 2014). Such behavior might involve risky and uncertain tax strategies (e.g., transfer pricing, offshore intellectual property havens) that sometimes stretch the limits of a legal interpretation of the tax law (Mehafdi 2000; Preuss 2012). Although, tax aggressiveness could benefit shareholders and managers, it could also impose costs on other stakeholders, such as the government and society at-large. Alm and Torgler (2011) argue that an administrative compliance strategy should not only be based on enforcement but also emphasize such things as service and, especially, trust, because individuals, instead of only being selfish, rational, and self-interested, are also ethical. They state "a social norm can be distinguished by the feature that it is process-oriented, unlike the outcome-orientation of individual rationality." The independent media can construct and perpetuate social norms and complying with such social norms is a kind of "process-oriented" ethical behavior.

Firms are likely to face trade-offs in their decision to engage in tax aggressive activities, which carry an uncertain outcome when challenged by the tax authorities. The direct benefit of tax planning is cash tax-savings, which can be utilized and redeployed to more productive uses such as funding investment opportunities or relieving financial constraints. The direct costs include tax planning costs, litigation and other expenses incurred in mounting a defense against tax authorities, back taxes, potentially hefty interest, penalties

and fines imposed by tax authorities, and more rigorous scrutiny from tax authorities in the long-run (e.g., being blacklisted by the tax authorities). Other costs include financial reporting costs, such as the costs of reporting lower book income, which is generally associated with the reporting of lower taxable income. There are also indirect costs associated with tax aggressive activities, including political costs, damage to the firm's reputation, and agency costs.

We predict that an independent media can constrain corporate tax aggressiveness by having an impact on both the expected direct and indirect costs of corporate tax aggressiveness. First, exposure of tax aggressive activities by the independent media can attract scrutiny from tax and regulatory authorities, which increases the probability of detection and enforcement, and opens the door for potentially large direct costs (such as litigation and other costs incurred in mounting a defense against tax authorities, back taxes, interests, fines and penalties).[14] In the case of corporate tax payments, it is reasonable to assume that the tax payments of most firms are not widely known to the public (Dowling 2014). Hanlon (2003) illustrates that it takes a tax expert to figure out what tax has been, and is likely to be, paid in any year of assessment.[15] Therefore, the independent media serves an important role in investigating and exposing corporate tax aggressive practices, which increase the probability of detection and enforcement by tax authorities, and thus increase the expected cost of tax aggressiveness.[16] Even if reporters are unable to unearth all the complex tax related transactions, Bednar (2012) and Bednar et al. (2013) document that articles with

[14] Dyck et al. (2010, case summaries) highlight the case of Sprint Corporation, where an article by the New York Times alerted the IRS to the existence of four tax shelters promoted by Ernst and Young, and subsequent IRS investigations charged Sprint's top executives with personal tax evasion via a mechanism that allowed them to cash out options without incurring tax liability for up to 30 years. This case illustrates that the media can conduct independent inquiry into tax avoidance activity.

[15] Many firms claim that they are transparent in their corporate values; however, Paine et al. (2005) document that most corporate codes of conduct rarely discuss tax obligations.

[16] As discussed in Dyck et al. (2010), even though journalists might be less specialized, they benefit from revealing complex issues, because high profile stories might help establish their career and reputation.

negative tone can influence corporate policies even if the coverage does not always highlight illegal acts.

Moreover, negative media coverage can increase the cost of tax aggressive practices through heightened regulatory scrutiny or legislative action. Drucker (2010, 2011) points out that a year after publishing an in-depth article about Google's profit shifting strategies, Google faced more than typical scrutiny from the IRS as well as from the French tax authorities. Additionally, Walgreens recently cancelled its planned inversion after facing extensive negative media coverage and public backlash (Kaufman 2014).

In addition, independent media exposure of tax aggressive practices imposes costly reputational damage on the firm and its managers and thus deters corporate tax aggressiveness. There is some recent evidence of the negative reputational effect associated with tax aggressiveness. Bankman (2004) suggests that a firm that aggressively avoids taxes may be labeled a "poor corporate citizen," which might adversely affect product market outcomes. Hanlon and Slemrod (2009) test the hypothesis that reputation matters, using both a sample of firms accused of tax sheltering as well as a sample of firms listed by the Citizens for Tax Justice as being poor corporate citizens for having low tax rates. They document some limited evidence consistent with reputational concerns being a viable disincentive for tax planning. Additionally, an experimental study by Hardeck and Hertl (2014) shows that aggressive CTSs have a negative effect on corporate reputation and purchase intention, whereas responsible CTSs have a positive effect. In our context, an independent media has the power to depict firms for the public and thus to affect their reputation (for better or worse). Therefore the media can be a mediator between CTSs and corporate reputation. For example, in the Starbucks case, although Starbucks had been successful in avoiding paying corporate taxes in the U.K. for several years, it became a political and social issue only after exposure by the media.

In addition, as noted earlier, Graham et al.'s (2014) survey-based results provide evidence that the potential for an adverse effect on company reputation significantly constrains firms' incentives to engage in tax planning strategies. In their survey, concern about reputation ranks second only to the concern that a tax strategy might not pass the judicial standard of "business purpose/economic substance." Graham et al. also document a positive association between reputational concerns and higher long-run cash effective tax rates and lower probabilities of engaging in tax shelters, indicating that reputational concerns are associated with lower tax avoidance. In summary, the media exposure of tax aggressive practices and the associated reputational costs can deter firms and managers from avoiding taxes.

Although we argued earlier that independent media exposure could deter corporate tax aggressiveness by increasing the expected costs of being tax aggressive, we note that the effectiveness of the media as a tool of corporate governance and, more specifically as a means of reducing tax aggressiveness, will depend on its ability and willingness to uncover and publicize corporate tax aggressive practices.[17] Given that the media are themselves businesses, their decisions to publicize corporate tax aggressive practices will depend on whether the perceived benefits of doing so outweigh the costs. And, given that the print media derives most of its revenues from subscriptions and advertising, which depend on circulation and readership, and that the electronic media derives most of its revenues from advertising, which depends on viewer or listener ratings (Besley et al. 2002; Besley and Prat 2006), the revenue generating ability of media firms is largely dependent on their ability to attract readers/viewers/listeners through content that is "newsworthy". As evidenced by the many editorials and other articles on tax avoidance, whether firms pay their "fair share" of

[17] The discussion in this and the following paragraph is largely based on Houston el al. (2011).

tax on their profits to the State or whether they engage in tax aggressive practices is clearly a newsworthy issue of ongoing public concern that has attracted much recent attention.

Djankov et al. (2003) argue that stringent government control over the flow of information is detrimental to financial development in a country because government influence over the media can prevent the media from delivering complete and unbiased news. Consistent with this view, Houston et al. (2011) find that greater media freedom, as reflected by lower state ownership, is associated with less corruption in bank lending, presumably because effective and independent media perform a monitoring function. In addition, Kim et al. (2015) argue that "…. To implement distorted political objectives compromises the independence of state-owned media and renders it captive of the government. Thus, the watchdog function of the media to produce externally generated corporate transparency is weakened by the extent of state ownership." In our context, state owned media may have incentives to expose tax avoiders because such exposure benefits the state. On the other hand, state ownership also could lead to cronyism and politically selective targeting of firms or sectors instead of objective reporting of news.

Competition among media firms also plays an important role in the effectiveness of the media's monitoring effort and its ability to report independently. As noted by Djankov et al. (2003), "voters, consumers, and investors obtain, on average, unbiased and accurate information" when competition among media firms is high. In such a competitive environment, media firms have stronger incentives to identify and report on issues of interest to readers/viewers/listeners in order to differentiate themselves from their competitors, and thus to increase their revenues (Gentzkow and Shapiro 2006). Corporate tax aggressive practice is one such ''newsworthy event'' that media firms can use to achieve differentiation. By contrast, media firms in a less competitive environment (and more concentrated industry) have relatively weaker incentives to identify and report on issues of interest, such as

corporate tax aggressiveness, because the benefits of differentiation in such an environment are relatively lower.

It follows that the extent of private ownership and competition among media firms correspond to greater media independence. That is, in these settings, the independent media have strong incentives to act as agenda-setters and corporate monitors to expose corporate tax aggressiveness. Based on this reasoning, we expect a negative relation between media independence and corporate tax aggressiveness. Therefore, we posit the following (in alternate form):

H1: Media independence is negatively related to a firm's corporate tax aggressiveness.

On the other hand, Gallemore et al. (2014) find limited evidence that firms or their top executives engaging in tax sheltering activities face significant reputation costs, such as increased executive or auditor turnover. Also, despite negative media coverage of controversial tax practices, many large corporations continue to avoid taxes, which suggests that negative media coverage may have only limited influence on corporate tax aggressiveness. In other words, whether media independence is associated with lower corporate tax aggressiveness is not a forgone conclusion. Therefore our main objective in this study is to empirically examine the potential association between media independence and corporate tax aggressiveness. We believe that our empirical evidence can serve as a basis for future studies to develop more formal theory.

Because corporate tax aggressiveness may be impacted by the institutional environment (Atwood et al. 2012), and media independence, as part of a country's informal institutions, does not develop in a vacuum, we explore how media independence interacts with the legal institutions in influencing tax aggressiveness. We predict that the effect of an informal institution, such as the independent media, in constraining tax aggressiveness is lower when formal legal institutions are already strong. Prior work suggests that firms engage

less in tax avoidance when legal tradition and investor rights are perceived to be stronger (e.g., Atwood et al. 2012). When managers perceive that legal enforcement and investor protection are stronger, the higher expected probability of detection and potential for imposition of penalties may discourage tax aggressiveness. Therefore, the independent media is likely to play a smaller and more diminished role in an environment where firms are already paying their fair share of taxes due to better monitoring and enforcement. Based on this reasoning, we posit the following cross-sectional hypothesis (in alternate form):

H2a: The negative relation between media independence and corporate tax aggressiveness is less pronounced when the country-level legal institutions are stronger.

Next, we consider how media independence interacts with the information environment to influence tax aggressiveness. We predict that the effect of the independent media in constraining tax aggressiveness is lower when the information environment is more transparent. Prior work suggests that informal institutions, such as societal trust, are less positively related to investors' reaction to corporate earnings announcements when country-level disclosure requirements are more stringent (Pevzner et al. 2015). In a similar vein, we conjecture that when the information environment is more transparent, there is a lower demand for the independent media to perform investigative reporting to expose and uncover tax aggressive activities. Therefore, we expect the independent media to play a lesser role in constraining tax aggressiveness in more transparent information environments. Based on this reasoning, we posit the following cross-sectional hypothesis (in alternate form):

H2b: The negative relation between media independence and corporate tax aggressiveness is less pronounced when the country-level information environment is more transparent.

3. Research Design

3.1 Measure of Media Independence

In our hypotheses development, we reason that an independent media, where journalists have incentives to investigate and uncover stories on wrongdoing, is better able to monitor corporate tax aggressiveness. Our first measure of media independence is based on the extent of private media ownership. Djankov et al. (2003) find that press and internet freedom are higher in countries with higher private (non-state) media ownership. Given this finding, we posit that private media ownership is more effective in monitoring. We measure the extent of private media ownership using the market share of viewership of private television stations (*Private_TV*).[18]

Our second measure of media independence is based on the extent of media industry competition. We posit that a competitive media industry is more effective in monitoring because media firms in a competitive environment have stronger incentives to identify and report on issues of interest such as corporate tax aggressiveness. We measure the extent of media competition using the aggregate market share of the non-top five largest television stations (*Comp_TV*) and daily newspapers (*Comp_Press*), respectively.[19] We obtain the information on private media ownership and media industry competition from Djankov et al. (2003). These measures are compiled from various data sources on the ownership and market share of media firms from reports based in the year 2000. We explore alternative measures of media independence in additional robustness checks in section 5.4.

[18] Djankov et al. (2003) also provide data for the market share of circulation of private newspapers. In our sample, all countries (except the Philippines) have a market share of 100%. We therefore do not use this variable because of its lack of variation.

[19] Industry competition is commonly measured based on the market concentration ratio. Following Houston et al. (2011), we define the media industry as *less* competitive if the aggregate market share of the top five largest television stations or daily newspapers is high. Conversely, we define the media industry as *more* competitive if the aggregate market share of the *non-top five* largest television stations or daily newspapers is high.

3.2 Measure of Tax Aggressiveness

Following Atwood et al. (2012), we define tax avoidance broadly as the reduction in the explicit taxes paid. We measure tax avoidance as the difference between the tax on pre-tax income computed at the home-country statutory corporate tax rate and the taxes actually paid, expressed as a percentage of pre-tax income. In particular, our measure of tax avoidance (*TAXAVOID*) for firm i in year t is computed as follows:

$$\mathrm{TAXAVOID}_{it} = \frac{[\sum_{t-2}^{t}(\mathrm{PTEBX} \times \tau)_{it} - \sum_{t-2}^{t} \mathrm{CTP}_{it}]}{\sum_{t-2}^{t} \mathrm{PTEBX}_{it}} \quad (1)$$

where *PTEBX* refers to pre-tax earnings before exceptional items, τ refers to home-country statutory corporate tax rate, and *CTP* refers to current taxes paid. We compute this measure using a three-year window because this time period is adequate to reduce the effects of items that reverse in just one year.[20] Following Atwood et al. (2012), we require the denominator in (1) to be positive; hence, our sample only includes firms that are profitable in the three-year window. This measure of tax avoidance indicates the amount of taxes that the firm is able to avoid relative to the amount of taxes it is supposed to pay based on the home-country statutory tax rate ("unmanaged tax amount"), and the extent of tax avoidance is increasing in this measure. Because we intend to capture the more aggressive tax avoidance activities that the media presumably care more about in the course of their coverage, we use the indicator

[20] We do not compute this measure over longer windows, such as five-year or ten-year windows (e.g., Dyreng et al. 2008), to avoid limiting our sample size. As noted by Dyreng et al. (2008), tax avoidance measures that are estimated over shorter periods of time may be imperfect because they include payments to (and refunds from) the tax authorities upon settling of tax disputes that arose years ago. Tax avoidance measures that are estimated over longer periods mitigate this concern because the income to which these taxes relate will more likely be included in the same ratio as the taxes. As a sensitivity check, we use a longer horizon of five years to compute tax avoidance, and find qualitatively unchanged results (untabulated). We also use two other alternate proxies of corporate tax avoidance. First, we compute tax avoidance based on the difference between the taxes on pre-tax income computed at the home-country statutory corporate tax rate and the tax expense recognized instead of the taxes actually paid. This measure is more closely related to the concept of GAAP effective tax rate, because it measures tax avoidance based on tax expense recognized in the financial statements rather than on cash tax actually paid. To capture the alternate measure of tax aggressiveness, we use an indicator variable that equals one if the country-industry tax avoidance based on tax expense recognized is within the top quartile, and zero otherwise (*TAXAGGR_ALT*). Second, we use the continuous measure of tax avoidance as the dependent variable. Our untabulated results are robust with these two alternate proxies of tax measures.

variable *TAXAGGR*, which equals one if *TAXAVOID* is in the top quartile in each country-industry combination, and zero otherwise, to proxy for tax aggressiveness.[21]

3.3 Empirical Models – Main Analyses

We estimate the following pooled cross-sectional logistic regression to test H1:

$$TAXAGGR_{it} = \alpha + \beta MEDIA_{it} + \psi CONTROLS_{it} + YEAR\_FE + IND\_FE + \varepsilon_{it} \quad (2)$$

where *TAXAGGR* is an indicator variable that equals one if *TAXAVOID* is in the top quartile in each country-industry combination, and zero otherwise, *MEDIA* is the measure of media independence (*Private_TV*, *Comp_TV*, or *Comp_Press*), *CONTROLS* is a vector of firm-level and country-level controls, and *YEAR_FE* and *IND_FE* are indicator variables for year and industry, respectively.[22] Because we conduct our hypothesis testing on a pooled sample, we cluster the standard errors by firm (Petersen 2009). The Appendix includes the detailed definitions of all the variables. Based on H1, we expect higher media independence to be associated with lower likelihood of tax aggressiveness, and hence we expect β to be negative.

We select *CONTROLS* that prior literature documents are associated with tax avoidance (Atwood et al. 2012). The first set of controls includes country-level variables (*TAXRATE*, *WW*, *BTAXC*, *TAXENF*, *FACTOR*, *VARCOMP*, *EARNVOL*, *CULTURE*, and *GDP*). We control for various characteristics of the country's tax system such as: 1) statutory tax rate (*TAXRATE*);[23] 2) whether the country's tax system follows a worldwide or territorial approach (*WW*); 3) required book-tax conformity (*BTAXC*); 4) strength of tax enforcement

[21] Other measures of tax avoidance used in the extant literature include DTAX (Frank et al. 2009), tax shelter prediction score (Wilson 2009), unrecognized tax benefit (UTB) prediction score (Rego and Wilson 2012). However, because we use an international sample of firms from Compustat Global, many of the variables required to compute these measures of tax avoidance are either not available or not applicable in a setting outside the U.S. (e.g., tax shelter prediction score and UTB prediction score).

[22] Industries are defined following the classification in Frankel et al. (2002), which is based on the following SIC codes: agriculture (0100–0999), mining and construction (1000–1999, excluding 1300–1399), food (2000–2111), textiles and printing/publishing (2200–2799), chemicals (2800–2824, 2840–2899), pharmaceuticals (2830–2836), extractive (2900–2999, 1300–1399), durable manufacturers (3000–3999, excluding 3570–3579 and 3670–3679), transportation (4000–4899), utilities (4900–4999), retail (5000–5999), services (7000–8999, excluding 7370–7379) and computers (3570–3579, 3670–3679, 7370–7379).

[23] We control for the statutory tax rate to avoid the potential mechanical relation that may result from the tax avoidance measure computation including the statutory tax rate.

(*TAXENF*), and 5) institutional factor (*FACTOR*) because Atwood et al. (2012) find that these tax system and institutional characteristics are associated with firms' incentives to avoid taxes.[24] We include the country average of managers' variable pay as a percentage of total compensation (*VARCOMP*) because prior literature suggests that managerial compensation incentives affect tax avoidance (Armstrong et al. 2012; Atwood et al. 2012; Rego and Wilson 2012). We include earnings volatility (*EARNVOL*) as a control because Atwood et al. (2010) report that *BTAXC* is positively correlated with the cross-sectional variance in pre-tax income, and hence it is important to include this variable to ensure that the effect of *BTAXC* on tax avoidance is not overstated due to cross-country differences in earnings volatility. Finally, we control for culture (*CULTURE*) and economic development (*GDP*) which may influence tax evasion across countries (Richardson 2006, 2008), and a time trend variable (*TREND*) to capture the fact that statutory tax rates have been declining over time and may affect corporate tax aggressiveness over time.

The second set of controls includes firm-level variables that prior research documents are associated with tax avoidance. We control for firm performance using pre-tax return on assets (*PROA*) because profitable firms have greater incentives to avoid taxes. We control for firm size (*SIZE*) because larger firms have more resources and ability to avoid taxes. On the other hand, profitable and larger firms may refrain from paying lower taxes to mitigate additional political scrutiny on whether they are paying less than their fair share of taxes. We control for tax planning opportunities, such as research and development tax credits and interest deductibility on debt, using research and development intensity (*R&D*) and leverage (*LEV*). We control for sales growth (*GROWTH*) because firms with higher sales growth enjoy greater marginal benefits from tax planning, and hence have greater incentives to avoid taxes

[24] We hand-collect each country's annual statutory corporate tax rate and whether the tax system is worldwide or territorial from various sources, including Ernst and Young's Worldwide Corporate Tax Guide, KPMG's Corporate and Indirect Tax Rate Survey, PwC's Worldwide Tax Summaries, PwC's "Evolution of Territorial Tax Systems in the OECD" report.

(Goh et al. 2015). Lastly, we control for firms with multinational operations (*MULTI*) because operations in different countries present greater opportunities to avoid taxes through income shifting,[25] and auditor quality (*BIGN*) which may affect corporate tax aggressiveness (Kanagaretnam et al. 2015).

3.4 Empirical Models – Cross-sectional Analyses

To test H2, we modify equation (2) to include the conditioning variable (*Conditioning_VAR*) and its interaction with *MEDIA,* and estimate the following pooled cross-sectional logistic regression:[26,27]

$$TAXAGGR_{it} = \alpha + \beta MEDIA + + \eta MEDIA \times Conditioning\_VAR + \gamma Conditioning\_VAR + \psi CONTROLS_{it} + YEAR\_FE + IND\_FE + \varepsilon_{it} \quad (3)$$

In H2a, we examine the moderating effect of legal institutions on the relation between media independence and the likelihood of corporate tax aggressiveness. Our measure of the strength of legal institutions (*LEGAL*) is the mean score of the three legal enforcement variables reported in La Porta et al. (1998). The detailed construction of *LEGAL* is outlined in the Appendix. We expect that the effect of an informal institution, such as the independent media, in constraining tax aggressiveness is lower when the formal legal institutions to deter

[25] We use an indicator variable rather than the ratio of foreign pre-tax income to total pre-tax income to proxy for multinational operations because Compustat Global does not provide a breakdown of domestic and foreign pre-tax income for non-U.S. multinationals. We recognize that a firm's inclination to be tax aggressive may be influenced not only by local media coverage of tax avoidance, but also by foreign media coverage. In an additional robustness test, we repeat our analyses after excluding multinational firms (i.e., *MULTI* = 1) from our sample and the un-tabulated results indicate that our inferences remain unchanged.

[26] Including higher order interaction terms in the model may cause the coefficient on the main effect of the conditioning variable to change sign unexpectedly, because the inclusion of *MEDIA* and its interaction with the conditioning factor can introduce multicollinearity among the interaction terms. To alleviate this concern, we mean-center *MEDIA* and the conditioning variables in our regression analyses (Aiken and West 1991; Neter et al. 1989).

[27] Ai and Norton (2003) argue that the interaction effect in a non-linear model, such as the logistic specification of equation (3), cannot be evaluated and interpreted simply by looking at the sign, magnitude, and statistical significance of the coefficient on the interaction term. Rather, interpreting the interaction effect requires computation of modified statistics based on cross-derivatives or cross-differences. However, Greene (2010) contends that the modified statistics proposed by Ai and Norton (2003) do not provide meaningful interpretations and statistical inferences. In addition, Kolasinski and Siegel (2010) draw on the extant statistics literature (e.g., Le 1998) and show that the interaction coefficient and test statistic in a standard logistic specification are appropriate for research dealing with non-extreme probabilities and are economically meaningful. Therefore, we continue to estimate and interpret the interaction effects in equation (3).

tax aggressiveness are already strong. Hence, based on H2a, we expect η to be positive in equation (3).

In H2b, we examine the moderating effect of the information environment on the relation between media independence and the likelihood of corporate tax aggressiveness. Prior work suggests that institutional investors induce changes in the information environment and therefore firm transparency and information production are higher for firms with higher institutional ownership (Ajinkya et al. 2005; Boone and White 2015). Hence, we measure the transparency of the information environment as the average country-level total institutional ownership divided by market capitalization in 2007 (*INFOENV*), as reported in Ferreira et al. (2010). We expect the independent media to play a lesser role in exposing and constraining tax aggressiveness in a more transparent information environment, where the demand for investigative reporting is lower. Hence, based on H2b, we expect η to be positive in equation (3).

4. Results

4.1 Sample

We collect financial information on tax aggressiveness, and other firm-level control variables for the period 1995–2007 from the Compustat Global database.[28] Our initial list of countries is obtained from the 49 countries in La Porta et al. (1998). We identify 37 countries with these firm-level variables available. The country-level institutional variables are either hand-collected (e.g., statutory tax rates, classification of worldwide or territorial tax system, etc.) or based on the data from related studies (e.g., La Porta et al. 1998; Djankov et al. 2003). We drop Hong Kong and Pakistan, because the information on country-level media and tax

[28] Our sample period ends in 2007 because we obtain the requisite data from the Legacy Global Compustat database. The last year for which data are available in this database is 2007. The new Global Compustat database, which has the more recent data, does not include pre-tax exceptional items (data item 57 in the old database) and foreign income taxes (data item 51 in the old database). Therefore, we are unable to compute the variable *TAXAVOID*, which requires data item 57 as an input and the variable *BTAXC*, which requires data item 51 as an input, using the new Global Compustat database.

enforcement data is not available; and Argentina, Peru, and Venezuela, because each country has less than 100 firm-year observations.[29] These sampling and data availability criteria result in a final sample that includes 32 countries. We also trim each continuous firm-level variable at the 1% and 99% level to mitigate the effects of extreme values. Depending on the availability of data, the final sample size used in the main regression analyses ranges from 85,135 to 86,212 firm-year observations for the 13-year sample period.

4.2 Descriptive Statistics

Table 1 reports the sample composition and the median characteristics for each of the 32 countries. The sample size for each country ranges widely from 137 firm-year observations for Israel to 27,304 firm-year observations for Japan.[30] Our main test variable is media independence (*Private_TV*, *Comp_TV*, and *Comp_Press*). As observed from Table 1, *Private_TV* varies widely across countries. TV is fully owned by the private sector in Brazil, Mexico, Turkey, and U.S.A., and fully owned by the government in Singapore. The TV industry is most competitive in the U.S.A. and Japan, while it is least competitive in Australia, Korea, and Portugal. In the print industry, competition is the highest in the U.S.A. and India, and lowest in Denmark.

Table 2 reports descriptive statistics and correlations of the regression variables for the sample. As observed from Table 2 Panel A, the mean (median) percentage of taxes avoided from pre-tax income (*TAXAVOID*) is 6.0% (6.5%), which, based on the mean (median) statutory corporate tax rate (*TAXRATE*) of 38.0% (40.0%), implies that the mean (median) firm in our sample paid a tax rate of 32.0% (33.5%). Table 2 Panels B and C reports Pearson correlations between the country-level and firm-level variables, respectively. The

[29] Our results are robust when these three countries are included in the sample.
[30] In a robustness test, we employ weighted least squares to control for variation in sample country composition, and re-estimate our models by country-year, so that each country-year observation receives equal weight in the regression (see Section 5.5).

three proxies for media are positively correlated, suggesting that each proxy captures a certain aspect of media independence.

4.3 Main Analyses – Test of H1

In this section, we report our results for the test of H1, which examines the association between media independence and corporate tax aggressiveness. As shown in Table 3, all three measures of media independence are negatively and significantly associated with the likelihood of tax aggressiveness (*z*-statistic = -2.69, -5.60, and -2.40 for *Private_TV*, *Comp_TV*, and *Comp_Press*, respectively). The effect of media independence on tax aggressiveness is also economically significant. Specifically, a one standard deviation increase in private TV ownership (*Private_TV*), competitiveness in the TV industry (*Comp_TV*), and competitiveness in the press industry (*Comp_Press*) is associated with a 3.72%, 10.34%, and 4.32% decrease in the likelihood of tax aggressiveness, respectively.

The coefficients of the control variables are consistent with expectations. Similar to Atwood et al. (2012), we find that tax system characteristics, such as having a worldwide tax system (*WW*), higher required book-tax conformity (*BTAXC*), and greater perceived tax enforcement (*TAXENF*), are associated with lower likelihood of tax aggressiveness. We also find that in countries with higher statutory tax rates (*TAXRATE*) and in countries where managers have higher variable compensation (*VARCOMP*), firms are more likely to be tax aggressive, possibly due to the additional incentives to avoid taxes when statutory tax rates are higher and when managers have high-powered incentives. We also find that cultural factor (*CULTURE*) and economic development (*GDP*) positively associated with the likelihood of tax aggressiveness. Turning to the other firm-level control variables, we find that more profitable (*PROA*) and larger (*SIZE*) firms are less likely to be tax aggressive, possibly due to additional political scrutiny of such firms. We also find that firms with higher leverage (*LEV*) and sales growth (*GROWTH*) are more likely to be tax aggressive, consistent

with greater opportunities to avoid taxes for firms with more debt and greater marginal benefits of avoiding taxes for growth firms. Lastly, consistent with Atwood et al. (2012) and Kanagaretnam et al. (2015), we find that firms with multi-national operations (*MULTI*), and firms audited by Big N auditors (*BIGN*) are associated with a lower likelihood of tax aggressiveness.

Overall, the results indicate that media independence is associated with lower tax aggressiveness, consistent with the independent media playing an important monitoring role over a firm's tax aggressive activities.

4.4 Cross-sectional Analyses – Tests of H2

In this section, we explore cross-sectional variation in the relation between media independence and tax aggressiveness. In H2a, we examine the moderating role of legal institutions; we expect media independence to play a lesser role in countries where legal institutions are already strong and effective in deterring tax aggressiveness. The results of our tests are presented in Table 4, and are largely consistent with our prediction in H2a. Specifically, we find that in Column 1 and 2, the negative association between media independence and the likelihood of tax aggressiveness is attenuated in countries with stronger institutions, which is consistent with legal institutions and media independence acting as substitute mechanisms in constraining tax aggressive behavior. In addition, the coefficients of *LEGAL* in Columns 1 and 2 are significantly negative, indicating that the likelihood of tax aggressiveness is lower in countries with stronger legal institutions.

In H2b, we examine the moderating role of the information environment; we expect media independence to play a smaller role in exposing and uncovering tax aggressive activities where the information environment is already transparent. The results of our tests are presented in Table 5. Consistent with H2b, we find that in all three columns, the negative association between media independence and the likelihood of tax aggressiveness is

attenuated in countries with a more transparent information environment. This finding is consistent with the independent media becoming less important in constraining tax aggressiveness when the general information environment is better, as it facilitates monitoring of tax avoidance by external parties. Also in all three columns, we find that the measure of information environment (*INFOENV*) is significantly negatively associated with the likelihood of tax aggressiveness, which suggests that having a better information environment curtails tax aggressive activities.

Overall, the results in Tables 4 and 5 support our cross-sectional hypotheses and suggest that the independent media play a reduced role in deterring tax aggressiveness in jurisdictions where legal institutions are strong and the information environment is more transparent.

5. Additional Analyses and Sensitivity Checks

5.1 Instrumental Variables (2SLS) Approach

We recognize that, like most studies of this type, our study may suffer from endogeneity-related concerns such as omitted variable problems, because it is difficult to control for all possible variables that potentially affect media ownership patterns and media industry concentration in a country. These potentially omitted variables could also be related to a firm's incentive and inclination to be tax aggressive in a given country, and thus our findings may be spurious. Our cross-sectional analyses mitigate this concern because it is arguably harder for an omitted correlated variable to explain both our main and our cross-sectional findings. Also, in all our cross-sectional analyses, we include additional controls for country-level legal institutions and information environment, and thus it is more difficult to find an omitted latent institutional variable that explains both country-level media independence and tax aggressiveness in our analyses. In our study, endogeneity-related problems are also of less concern than they are in a pure cross-country analysis because we are examining the impact

of country-level media independence on firm-level likelihood of tax aggressiveness. It is unlikely that an individual firm's inclination to be tax aggressive influences nationwide media independence. On the other hand, it is conceivable that high levels of corporate tax aggressiveness could generate calls for more independent media to uncover these activities (reverse causality). If this type of feedback effect were in force, the empirical relationship between media independence and the likelihood of tax aggressiveness should be positive. Our consistent finding of a negative and significant association between media independence and the likelihood of tax aggressiveness suggests that this type of feedback effect is unlikely to be a significant concern. Nonetheless, we attempt to address potential endogeneity concerns by employing a two-stage least squares instrumental variables (2SLS) approach.

Following prior research on the media (e.g., Brunetti and Weder 2003; Djankov et al. 2003; Houston et al. 2011), we use the extent of democracy in a country as an instrument for media independence. Prior work has documented that democracy exerts a significant influence over media ownership pattern and competition. In particular, Djankov et al. (2003) examine various cross-country determinants of media ownership, such as the level of development, government ownership in other sectors, primary school enrollment, and autocracy, and find that autocracy is consistently and significantly associated with higher state ownership of the media. On the other hand, it is less likely for a country's democracy to have a direct impact on a firm's inclination to be tax aggressive. We proxy for the level of democracy in a country using the political rights index (*Democracy*) obtained from Freedom House, which is an index representing people's ability to participate freely in the political

process, with higher values representing stronger political rights and hence a more democratic environment.[31]

We report the results of the first-stage regression in Table 6, Columns 1 to 3. The coefficient on *Democracy* is positive and significant, consistent with our prediction that media independence is higher in more democratic countries. The weak identification test suggests that the instrument is powerful, with the F statistic for the explanatory power of the instrument being highly significant at the 1% level in all model specifications, which suggests that the instrument is relevant.

We then use the predicted value of *MEDIA* from the first-stage regression as our variable of interest in the second stage, and report the results in Table 6, Columns 4 to 6. The results show that the predicted value of *MEDIA* is significantly negatively associated with the likelihood of tax aggressiveness, which is consistent with the results reported in the main analyses. Overall, the results from the instrumental variables approach indicate that our main results still hold after controlling for potential endogeneity.

5.2 Role of Media Audience Sophistication

The reliance of the media audience on media reports on corporate tax aggressiveness and the ensuing reaction of the media audience likely vary with their level of sophistication and ability to understand and digest these reports. We expect a more sophisticated audience to be better able to assimilate and react to media reports on corporate tax aggressiveness. Furthermore, we expect managers to care more about their reputations among a sophisticated audience, who are likely to be their peers and important stakeholders. Therefore, the effect of media independence in constraining tax aggressiveness is likely to be more pronounced when the media audience is more sophisticated. We measure audience sophistication based on its

[31] Our results are similar when we use an alternative proxy for democracy based on a democracy index obtained from the Polity IV dataset of Marshall and Jaggers (2007). This index is derived from coding the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the executive, with higher values representing a more democratic environment. We do not include both proxies as instruments because both variables are very highly positively correlated ($\rho = 0.83$).

educational level (*Education*), and obtain the country average education level from responses to the World Values Surveys. We present the results of this analysis in Table 7. Consistent with our expectation, we find in Columns 1 and 2 that the interaction between *Education* and *MEDIA* is negative and significant, which suggests that the impact of media independence in deterring tax aggressiveness is accentuated in countries where the average education level is higher.

5.3 Controlling for Accrual Components

Next, we investigate the relation between media independence and the likelihood of tax aggressiveness after controlling for accruals. Miller (2006) finds that the press acts as a watchdog for corporate fraud by rebroadcasting information from other information intermediaries and by undertaking investigative reporting, and Dyck et al. (2010) document that the media plays an important role in detecting corporate fraud, especially for the biggest fraud cases. Both studies suggest that media independence could play an important role in deterring accruals earnings management. Therefore, the negative association between media independence and the likelihood of tax aggressiveness that we document could be due to the mechanical effect of accruals on the likelihood of tax aggressiveness (that is, media independence affects the likelihood of tax aggressiveness through accruals).

We examine whether media independence affects the likelihood of tax aggressiveness solely through accruals or through other non-accrual-related tax-planning strategies, such as the use of tax havens, tax shelters, income shifting, cost sharing arrangements, etc. To do so, we decompose total accruals into three components, change in net current operating assets (*ΔWC*), change in net non-current operating assets (*ΔNCO*) and change in net financial assets (*ΔFIN*) based on the reliability classification developed by Richardson et al. (2005) and used in Atwood et al. (2012). We include these three components in our main analyses in order to allow different types of accruals to differentially affect the likelihood of tax aggressiveness.

The untabulated results indicate that media independence is associated significantly with a lower likelihood of tax aggressiveness. This result indicates that the relation between media independence and the likelihood of tax aggressiveness that we document is not solely driven by accruals management, but also results from other tax planning strategies.

5.4 Alternate Measures of Media Independence

In this section, we test the robustness of our results by considering two alternate measures of media independence: media freedom of broadcast (*Free_Broadcast*) and print content (*Free_Print*), respectively. Both measures capture the extent of laws and regulations that influence broadcast and print content as well as the government's inclination to use these laws to restrict the ability of media to operate. These measures are based on the Broadcast Freedom Index and the Print Freedom Index, respectively, from the Freedom House in the year 2000. Our untabulated results indicate that both measures of media independence are significantly negatively associated with the likelihood of tax aggressiveness, indicating that our inferences are robust to these alternate measures of media independence.

5.5 Additional Robustness Checks

We discuss several additional robustness checks in this sub-section. As highlighted earlier, a significant portion of our firm-year observations consists of firms from the U.S. and Japan. To mitigate the concern that our results are driven by observations from these two countries, we re-estimate our models using two different specifications. First, we employ a weighted least squares (WLS) approach to address the concern that large proportions of the sample (e.g., Japan and the U.S.) unduly influencing the empirical results and that each of the 32 countries receives equal weight in the regression estimations (Dittmar et al. 2003). Second, in a much more restrictive test, we repeat our analyses using country-year observations rather than firm-year observations. Under this approach, each country-year receives equal weight in the regression. The downside of this approach is that it substantially reduces the variation in

our sample.[32] The results for the two alternative specifications are presented in Table 8. We continue to find a significant negative relation between media independence and tax aggressiveness in all columns (with the exception of Column 4, which is negative but insignificant). These analyses provide additional evidence that our results are not driven by over-representation from certain countries.[33]

This study posits that an independent media might play a "monitoring role" in constraining corporate tax aggressiveness. In the main regression specifications, we control for Big N auditor which might act as an alternative monitoring mechanism. However, there might be some other firm-level corporate governance mechanisms that are not controlled for in the earlier analyses. For example, Lanis and Richardson (2011) find that composition of board of directors affects corporate tax aggressiveness. However, data on firm-level corporate governance are not readily available. Instead, we rely on family ownership (*FAMILY*) and widely-held ownership (*WIDELYHELD*) at the country-level from La Porta et al. (1999) as alternative controls for governance.[34] The untabulated results indicate that our main results are robust to controlling for ownership structure.

6. Conclusion

We study the effects of the independent media on corporate tax aggressiveness for a large sample of firms from 32 countries around the world. Because the exposure of tax aggressiveness by the media can potentially act as a deterrent for corporate tax aggressive behavior beyond legal institutions such as tax enforcement, we empirically examine the

[32] In this test, we compute the average country-year tax aggressiveness based on the continuous measure of tax avoidance, *TAXAVOID*.

[33] We also conduct two additional robustness checks. First, we control for country-industry fixed effects in the regression. Second, we employ Fama-MacBeth (1973) estimation method based on yearly regression. Our untabulated results indicate that the coefficient on *Comp_TV* and *Comp_Press* is still negative and significant at the 1% level; however, *Private_TV* is now insignificant. Overall these additional tests suggest that media competition, rather than media ownership has a more pronounced effect on tax aggressiveness.

[34] We do not use these governance variables in our main regression because complete data is only available for 24 countries.

relation between media independence and tax aggressiveness. We use the market share of viewership of private television stations, and the media competition among television stations and daily newspapers as proxies for media independence. We measure tax avoidance broadly as the difference between the tax on pre-tax income computed at the home-country statutory corporate tax rate and the taxes actually paid. To capture tax aggressiveness, we use an indicator variable that equals one if the country-industry tax avoidance is within the top quartile, and zero otherwise. This measure attempts to capture the more aggressive tax-related activities that journalists presumably are more interested about in their coverage and thus is more closely related to our research question.

We find robust evidence consistent with our hypothesis that media independence is associated with lower likelihood of tax aggressiveness, even after controlling for legal institutions such as tax system characteristics that have been documented to be effective in constraining tax avoidance (Atwood et al. 2012). Our results are also economically significant. After controlling for home country tax system characteristics, a one standard deviation increase in media independence is associated with a lower likelihood of tax aggressiveness by between 3.7% and 10.3%, across the various measures of media independence. This suggests that media independence plays an important monitoring role in mitigating the likelihood of tax aggressiveness over and above legal institutions such as home country tax system characteristics.

In additional analyses, we find that the effect of media independence on corporate tax aggressiveness is more pronounced when the legal environment is weaker and when the information environment is less transparent. We also find that the effect of media independence is accentuated when the expected reputational costs are higher, i.e., when the media audience is more educated. We subject our results to a number of robustness tests, including using an instrumental variables approach to mitigate endogeneity concerns,

controlling for accrual components to ensure that our results are not driven by the mechanical relation between accruals and the likelihood of tax aggressiveness, using two alternate measures of media independence, using two alternate measures of tax aggressiveness, and employing weighted least square regression estimates. Our inferences are robust to these additional tests.

Our study provides several important contributions to the literature. First, it contributes to the literature investigating cross-country determinants of tax aggressiveness. We show that media independence also affects tax aggressiveness, in addition to tax system characteristics. Second, our study contributes to the recent ethics literature that examines the effects of firm reputation on corporate tax avoidance and CSR activities by documenting the role of the media in the process. Third, our study extends the emerging literature on the economic role of the independent media.

References

Ai, C., Norton, E. C., 2003. Interaction terms in logit and probit models. Economics Letters 80 (1): 123-129.

Aiken, L., West, S., 1991. Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage Publications.

Ajinkya, B., Bhojraj, S., Sengupta, P., 2005. The association between outside directors, institutional investors, and the properties of management earnings forecasts. Journal of Accounting Research 43, 343-376.

Alm, J., Torgler, B., 2011. Do ethics matter? Tax compliance and morality. Journal of Business Ethics 101, 635-651.

Armstrong, C.S., Blouin, J.L., Larcker, D.F., 2012. The incentives for tax planning. Journal of Accounting and Economics 53, 391-411.

Atwood, T.J., Drake, M.S., Myers, L.A., 2010. Book-tax conformity, earnings persistence and the association between earnings and cash flows. Journal of Accounting and Economics 50, 111-125.

Atwood, T.J., Drake, M.S., Myers, J.N., Myers, L.A., 2012. Home country tax system characteristics and corporate tax avoidance: International evidence. The Accounting Review 87 (6), 1831-1860.

Austin, C.R., Wilson, R., 2015. Are reputational costs a determinant of tax avoidance? Working paper, University of Iowa.

Bankman, J., 2004. An academic's view of the tax shelter battle. In: Aaron, H.J., Slemrod, J., Eds. The Crisis in Tax Administration. Brookings Institution, Washington, D.C., 9-37.

Bednar, M., 2012. Watchdog or lapdog? A behavioral view of the media as a corporate governance mechanism. Academy of Management Journal 55 (1), 131-150.

Bednar, M., Boivie, S., Prince, N., 2013. Burr under the saddle: How media coverage influences strategic change. Organization Science 24 (3), 910-925.

Besley, T., Burgess, R., Prat, A., 2002. Mass media and political accountability. In: The right to tell: The role of the media in development. Islam, R., Ed. Washington, D.C.: The World Bank.

Besley, T., Prat, A., 2006. Handcuffs for the grabbing hand? Media capture and government accountability. American Economic Review 96, 720-736.

Boone, A., White, J., 2015. The effect of institutional ownership on firm transparency and information production. Journal of Financial Economics 117, 508-533.

Brunetti, A., Weder, B., 2003. A free press is bad news for corruption. Journal of Public Economics 87, 1801-1824.

Chen, P.F., He, S., Ma, Z., Novoselov, K.E., 2013. Independent media and audit quality. The Hong Kong University of Science and Technology, Working Paper.

Christensen, J., 2011. The looting continues: Tax havens and corruption. Critical Perspectives on International Business, 7(2), 177–196.

Christensen, J., Murphy, R., 2004. The social irresponsibility of corporate tax avoidance: Taking CSR to the bottom line. Development 47, 37-44.

Coronel, S.S., 2010. Corruption and the watchdog role of the news media. In: Public sentinel: News media and governance reform. Norris, P., Ed. Washington, D.C.: The World Bank.

Dittmar, A., Mahrt-Smith, J., Servaes, H. 2003, International corporate governance and corporate cash holdings. Journal of Financial and Quantitative Analysis 38: 111-133.

Dowling, G.R., 2014. The curious case of corporate tax avoidance: Is it socially irresponsible? Journal of Business Ethics 124, 173-184.

Djankov, S., McLiesh, C., Nenova, T., Shleifer, A., 2003. Who owns the media? Journal of Law and Economics 46, 341-381.

Drucker, J., 2010. Google 2.4% rate shows how $60 billion is lost to tax loopholes. Bloomberg (October 21st).

Drucker, J., 2011. IRS auditing how Google shifted profits offshore to avoid taxes. Bloomberg (October 13th).

Dyck, A., Morse, A., Zingales, L., 2010. Who blows the whistle on corporate fraud? The Journal of Finance 65 (6): 2213-2253.

Dyck, A., Volchkova, N., Zingales, L., 2008. The corporate governance role of the media: Evidence from Russia. The Journal of Finance 63, 1093-1135.

Dyreng, S., Hanlon, M., Maydew, E., 2008. Long-run corporate tax avoidance. The Accounting Review 83, 61-82.

Elster, J., 1989. Social norms and economic theory. Journal of Economic Perspectives 3 (4), 99-117.

EY. 2014. Bridging the divide: Highlights from 2014 tax risk and controversy survey.

Ferreira, M., Massa, M., Pedro, P., 2010. Dividend clienteles around the world: Evidence from institutional holdings. Working Paper, Universidade Nova de Lisboa. http://ssrn.com/abstract=1447573.

Frank, M., Lynch, L., Rego, S., 2009. Tax reporting aggressiveness and its relation to aggressive financial reporting. The Accounting Review 84, 467-496.

Frankel, R.M., Johnson, M.F., Nelson, K.K., 2002. The relation between auditors' fees for non-audit services and earnings management. The Accounting Review 77 (Supplement): 71–106.

Gallemore, J., Maydew, E.L., Thornock, J.R., 2014. The reputational costs of tax avoidance. Contemporary Accounting Research 31 (4), 1103-1133.

Gentzkow, M., Shapiro, J., 2006. Media bias and reputation. Journal of Political Economy 114, 280-316.

Gilders, F., Taylor, J., Richardson, G., Walpole, M., 2004. Understanding taxation law: An interactive approach. Sydney: LexisNexis Butterworths.

Goh, B.W., Lee, J., Lim, C.Y., Shevlin, T., 2015. The effect of corporate tax avoidance on the cost of equity. The Accounting Review (forthcoming).

Graham, J.R., Hanlon, M., Shevlin, T., Shroff, N., 2014. Incentives for tax planning and avoidance: Evidence from the field. The Accounting Review 89 (3), 991-1023.

Graham, J., Tucker, A., 2006. Tax shelters and corporate debt policy. Journal of Financial Economics 81, 563-594.

Greene, W., 2010. Testing hypotheses about interaction terms in nonlinear models. Economics Letters 107 (2): 291-296.

Hanlon, M., 2003. What can we infer about a firm's taxable income from its financial statements? National Tax Journal 56(4): 831-863.

Hanlon, M., Heitzman, S., 2010. A review of tax research. Journal of Accounting and Economics 50, 127-178.

Hanlon, M., Slemrod, J., 2009. What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. Journal of Public Economics 93, 126-141.

Hardeck, I., Hertl, R., 2014. Consumer reactions to corporate tax strategies: Effects on corporate reputation and purchasing behavior. Journal of Business Ethics 123, 309-326.

Houston, J.F., Lin, C., Ma, Y., 2011. Media ownership, concentration and corruption in bank lending. Journal of Financial Economics 100, 326-350.

Kanagaretnam, K., Lee, J., Lim, C.Y., Lobo, G.J., 2015. Relation between Auditor Quality and Corporate Tax Aggressiveness: Implications of Cross-Country Institutional Differences. Auditing: A Journal of Practice and Theory (forthcoming).

Kaufman, A., 2014. How Americans scared Walgreens out of a $4 billion tax dodge. Huffington Post (August 7th).

Kim, J.B., Li, L., Wei, M., Zhang, H., 2015. Captured media and corporate transparency: Evidence from International and Chinese firms. Contemporary Accounting Research (forthcoming).

Kolasinski, A. C., Siegel, A. F., 2010. On the economic meaning of interaction term coefficients in non-linear binary response regression models. Working Paper, University of Washington. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1668750.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 1999. Corporate ownership around the world. Journal of Finance 54(2): 471-517

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1998. Law and finance. Journal of Political Economy 106, 1113-1155.

Lanis, R., Richardson, G., 2011. The effect of board of director composition on corporate tax aggressiveness. Journal of Accounting and Public Policy 30: 50-70.

Lanis, R., Richardson, G., 2014. Is corporate social responsibility performance associated with tax avoidance? Journal of Business Ethics 124, 1-19.

Le, C. T., 1998. Applied Categorical Data Analysis. New York: John Wiley & Sons inc.

Leeson, P., 2008. Media freedom, political knowledge, and participation. Journal of Economic Perspectives 22, 155-169.

Lisowsky, P., 2010. Seeking shelter: Empirically modeling tax shelters using financial statement information. The Accounting Review 85 (5), 1693-1720.

Marshall, M., Jaggers, K., 2007. Political regime characteristics and transitions, 1800-2007. Working Paper, George Mason University.

Mauro, P., 1995. Corruption and growth. The Quarterly Journal of Economics, 110, 681–712.

Mehafdi, M., 2000. The ethics of international transfer pricing. Journal of Business Ethics 28, 365-381.

Miller, G., 2006. The press as a watchdog for accounting fraud. Journal of Accounting Research 44, 1001-1033.

Neter, J., Wasserman, W., Kutner, M.H., 1989. Applied linear regression models (2nd edn) Homewood, IL: Irwin.

Paine, L., Deshpande, R., Margolis, J. D., Bettcher, E., 2005. Up to code: Does your company's conduct meet world-class standards? Harvard Business Review 83(12), 122–133.

Petersen, M.A., 2009. Estimating standard errors in finance panel data sets: Comparing approaches. Review of Financial Studies 22, 435-480.

Pevzner, M., Xie, F., Xin, X., 2015. When firms talk, do investors listen? The role of trust in stock market reactions to corporate earnings announcements. Journal of Financial Economics 117 (1), 190-223.

Preuss, L., 2012. Responsibility in paradise? The adoption of CSR tools by companies domiciled in tax havens. Journal of Business Ethics 110, 1-14.

PwC. 2014. 17th Annual global CEO survey: Tax strategy, corporate reputation, and a changing international tax system.

Rego, S., Wilson, R., 2012. Equity risk incentives and corporate tax aggressiveness. Journal of Accounting Research 50 (3), 775-809.

Reuters, 2012. Special Report: Amazon's billion-dollar tax shield. December 6, available at http://www.reuters.com/article/2012/12/06/us-tax-amazon-idUSBRE8B50AR20121206

Richardson, G., 2006. Determinants of tax evasion: A cross-country investigation. Journal of International Accounting, Auditing and Taxation 15:150–169.

Richardson, G., 2008. The relationship between culture and tax evasion across countries: Additional evidence and extensions. Journal of International Accounting, Auditing and Taxation 17: 67–78.

Richardson, S., Sloan, R., Soliman, M., Tuna, I., 2005. Accrual quality, earnings persistence and stock prices. Journal of Accounting and Economics 39 (3), 437-485.

Scholes, M., Wolfson, M., Erickson, M., Hanlon, M., Maydew, E., Shevlin, T., 2014. Taxes and Business Strategy: A Planning Approach. Fifth Edition. Pearson, Upper Saddle River, New Jersey 07458.

Wilson, R., 2009. An examination of corporate tax shelter participants. The Accounting Review 84, 969-999.

World Bank Institute, 2002. The Right to Tell: The Role of Mass Media in Economic Development. The World Bank, Washington, D.C.

APPENDIX: VARIABLES DEFINITION

TAXAVOID	=	Measure of tax avoidance, defined as: $\frac{[\sum_{t-2}^{t}(PTEBX \times \tau)_{it} - \sum_{t-2}^{t} CTP_{it}]}{\sum_{t-2}^{t} PTEBX_{it}}$ where *PTEBX* is pre-tax earnings before exceptional items, τ is home-country statutory corporate tax rate and *CTP* is current taxes paid. The extent of tax avoidance is increasing in this measure.
TAXAGGR	=	An indicator variable that equals one if *TAXAVOID* (defined above) is within the top quartile in each country-industry combination, and zero otherwise. This variable captures tax aggressiveness.
Private_TV	=	Private TV ownership (by market share), computed as one minus state ownership of TV. Data from Djankov et al. (2003).
Comp_TV	=	Competitiveness in the TV industry, measured as one minus the aggregate market share of the five largest television stations. Data from Djankov et al. (2003).
Comp_Press	=	Competitiveness in the press industry, measured as one minus the aggregate market share of the five largest daily newspapers. Data from Djankov et al. (2003).
LEGAL	=	Law enforcement index, which is the mean score of the following three legal enforcement variables reported in La Porta et al. (1998): (1) the mean for 1980–1983 of a variable provided by Business International Corp., capturing the efficiency and integrity of the judicial system; (2) the mean for 1982–1995 of a rule of law variable obtained from International Country Risk; and (3) the mean for 1982–1995 of a corruption variable that assesses the corruption in government, obtained from International Country Risk.
INFOENV	=	Average country-level total institutional ownership divided by market capitalization in 2007, as reported in Ferreira et al. (2010).
TAXRATE	=	Country statutory tax rate.
WW	=	An indicator that equals one if the home-country adopts a worldwide tax system, and zero if the home-country adopts a territorial tax system.
BTAXC	=	Proxy for the level of required book-tax conformity, following Atwood et al. (2010). *BTAXC* is computed based on the conditional variance of current tax expense from the following model, estimated by country-year: $CTE_t = \theta_0 + \theta_1 PTBI_t + \theta_2 ForPTBI_t + \theta_3 DIV_t + e_t$ where *CTE* is current tax expense, *PTBI* is pre-tax book income, *ForPTBI* is the estimated foreign pre-tax book income, *DIV* is total dividends, and all variables are scaled by average total assets. *BTAXC* is then computed as the scaled ranking of the root mean squared errors (RMSE) from these country-year regressions, and RMSEs are ranked in descending order so that higher values of *BTAXC* indicate higher required book-tax conformity.
TAXENF	=	Proxy for the level of tax enforcement in the country, based on the 1996 World Competitiveness Report.

VARCOMP	=	The sum of the value of option compensation and restricted stock compensation divided by total compensation at the country level, to proxy for CEO incentives. Data is from Bryan et al. (2010).
EARNVOL	=	The scaled descending rank, between zero and one, of cross-sectional pre-tax earnings volatility by country-year, following Atwood et al. (2012). Pre-tax earnings are defined as pre-tax income before exceptional items, divided by lagged total assets.
FACTOR	=	The first principal component from the factor analysis of the country's legal tradition (common law versus code law), strength of investor rights, and ownership concentration as developed by La Porta et al. (1998).
CULTURE	=	Ethnolinguistic fractionalization index that measures the probability that two randomly selected individuals within a country belong to the same ethnic group. It is an index between 0 and 1, with higher values denoting lower fractionalization. Data from Mauro (1995) and used in Richardson (2006).
GDP	=	Log of Real historical Gross Domestic Product per capita (in billions of 2005 dollars). Source: www.ers.usda.gov/datafiles/International_Macroeconomic_Data/... Data
TREND	=	Time trend variable, defined as the current fiscal year minus the first fiscal year in our sample (1995).
PROA	=	Pre-tax return on assets is defined as pre-tax income before exceptional items, divided by lagged total assets.
SIZE	=	Natural logarithm of total assets.
R&D	=	Research and development expenditures divided by ending total assets.
LEV	=	Total liabilities divided by ending total assets.
GROWTH	=	One-year percentage change in sales.
MULTI	=	An indicator variable that equals zero if foreign income taxes is missing or zero, and equals one otherwise.
BIGN	=	Indicator variable that equals one if the firm's auditor is a Big N auditor, and zero otherwise.
Democracy	=	Political rights index published by the Freedom House. Higher ratings indicate countries that comes closer "to the ideals suggested by the checklist questions of: (1) free and fair election; (2) those elected rule; (3) there are competitive parties or other competitive political groupings; (4) the opposition has an important role and power; and (5) the entities have self-determination or an extremely high degree of autonomy.
Education	=	This is a three level (upper, middle, and low) index relating to the highest education level attained, recoded and reported in WVS. We code the variable as 1 if the highest education level attained is upper or middle, and 0 otherwise, and use the average education level in each country to proxy for the general education level of the population.
ΔWC	=	Change in current operating assets minus current operating liabilities from year t-1 to year t, divided by total assets.
ΔNCO	=	Change in noncurrent operating assets minus noncurrent operating

		liabilities from year t-1 to year t, divided by total assets.
ΔFIN	=	Change in financial assets minus financial liabilities from year t-1 to year t, divided by total assets.
Free_Broadcast	=	Broadcast freedom index, defined as one minus the Broadcast Freedom Index from Freedom House in the year 2000. The index ranges from 0 to 15, and measures the extent of laws and regulations that influence broadcast content. The greater the index, the higher is the broadcast freedom.
Free_Print	=	Print freedom index, defined as one minus the Print Freedom Index from Freedom House in the year 2000. The index ranges from 0 to 15, which measures the extent of laws and regulations that influence print content. The greater the index, the higher is the print freedom.
TAXAGGR_ALT	=	Alternative measure of tax avoidance, defined as: $\frac{[\sum_{t-2}^{t}(PTEBX \times \tau)_{it} - \sum_{t-2}^{t} CTE_{it}]}{\sum_{t-2}^{t} PTEBX_{it}}$ where *PTEBX* is pre-tax earnings before exceptional items, τ is home-country statutory corporate tax rate and *CTE* is current tax expense. It is an indicator that equals one if the above measure is within the top quartile in each country-industry combination, and zero otherwise.
FAMILY	=	Percent of firms controlled by the family shareholder in each country, where the cutoff used to define effective control is 10%. Data from La Porta et al. (1999).
WIDELYHELD	=	Percent of firms without any effective controlling shareholders in each country, where the cutoff used to define effective control is 10%. Data from La Porta et al. (1999).

TABLE 1
Sample Composition and Median Characteristics by Country

Country	*N*	*TAXAVOID*	*Private_TV*	*Comp_TV*	*Comp_Press*	*LEGAL*	*INFOENV*	*TAXRATE*	*WW*	*BTAXC*	*TAXENF*
Australia	3391	0.27	0.83	0.00	0.47	9.51	0.11	0.30	0	0.14	4.58
Austria	540	0.13	0.22	0.24	0.26	9.36	0.18	0.34	0	0.79	3.60
Belgium	630	0.11	0.59	0.43	0.35	9.44	0.13	0.40	0	0.63	2.27
Brazil	264	0.09	1.00	0.04	0.76	6.13	0.33	0.34	1	0.48	2.14
Chile	316	0.04	0.70	0.03	0.48	6.52	0.01	0.17	1	0.88	4.20
Denmark	943	0.05	0.20	0.13	0.00	10.00	0.21	0.30	0	0.36	3.70
Finland	816	0.01	0.52	0.05	0.55	10.00	0.47	0.28	0	0.43	3.53
France	3853	0.08	0.57	0.08	0.73	8.68	0.27	0.34	0	0.48	3.86
Germany	3643	0.18	0.39	0.30	0.32	9.05	0.24	0.38	0	0.12	3.41
Greece	459	0.10	0.92	0.21	0.48	6.82	0.15	0.35	1	0.76	2.36
India	1355	0.20	0.12	0.16	0.81	5.58	0.13	0.37	1	0.24	2.16
Indonesia	809	0.10	0.77	0.04	0.54	2.88	-	0.30	1	0.33	2.53
Ireland	394	0.11	0.32	0.43	0.05	8.36	0.32	0.20	1	0.69	3.55
Israel	137	0.14	0.64	0.45	0.27	7.72	0.34	0.36	1	0.71	3.69
Italy	1175	0.08	0.39	0.20	0.60	7.07	0.19	0.40	0	0.57	1.77
Japan	27304	-0.02	0.61	0.51	0.61	9.17	0.08	0.42	1	0.62	4.41
Korea, Rep.	1161	0.22	0.23	0.00	0.50	5.55	0.16	0.30	1	0.43	3.29
Mexico	253	0.13	1.00	0.04	0.57	5.37	0.34	0.33	1	0.40	2.46
Netherlands	1275	0.11	0.43	0.31	0.57	10.00	0.24	0.35	0	0.40	3.40
New Zealand	498	0.12	0.29	0.08	0.39	10.00	0.12	0.33	0	0.50	5.00
Norway	729	0.14	0.53	0.13	0.56	10.00	0.23	0.28	1	0.10	3.96
Philippines	448	0.14	0.82	0.20	0.76	3.47	0.08	0.32	1	0.45	1.83
Portugal	251	0.13	0.62	0.00	0.53	7.19	0.13	0.35	0	0.86	2.18
Singapore	1786	0.04	0.00	0.10	0.07	8.93	0.12	0.22	0	0.64	5.05
South Africa	657	0.27	0.10	0.01	0.38	6.45	0.17	0.38	1	0.17	2.40
Spain	1001	0.16	0.57	0.20	0.66	7.14	0.16	0.35	0	0.74	1.91
Sweden	1372	0.06	0.49	0.08	0.59	10.00	0.38	0.28	1	0.36	3.39
Switzerland	1564	0.07	0.11	0.45	0.61	10.00	0.29	0.25	0	0.69	4.49
Taiwan	411	0.17	0.37	0.03	0.22	7.37	0.15	0.25	1	0.90	3.25
Turkey	268	0.21	1.00	0.26	0.47	4.79	-	0.33	1	0.45	2.07
United Kingdom	8542	0.06	0.40	0.14	0.46	9.22	0.24	0.30	1	0.19	4.67
United States	19967	0.10	1.00	0.65	0.89	9.54	0.75	0.40	1	0.02	4.47

TABLE 1 (continued)

Country	*VARCOMP*	*EARNVOL*	*FACTOR*	*CULTURE*	*GDP*	*PROA*	*SIZE*	*R&D*	*LEV*	*GROWTH*	*MULTI*	*BIGN*
Australia	0.31	0.22	1.39	0.11	10.42	0.09	4.77	0.00	0.19	0.09	0	0
Austria	0.00	0.82	-0.78	0.03	10.48	0.05	5.86	0.00	0.24	0.04	0	0
Belgium	0.00	0.60	-1.74	0.36	10.43	0.06	5.97	0.00	0.22	0.05	0	1
Brazil	0.02	0.64	-0.68	0.06	8.58	0.09	7.21	0.00	0.25	0.10	0	1
Chile	0.00	0.11	0.59	0.05	8.89	0.08	5.71	0.00	0.23	0.05	0	1
Denmark	0.11	0.62	-0.53	0.03	10.73	0.07	5.60	0.00	0.25	0.06	0	1
Finland	0.03	0.60	-0.04	0.11	10.45	0.08	6.03	0.00	0.22	0.04	0	1
France	0.14	0.35	0.18	0.15	10.41	0.06	5.83	0.00	0.21	0.05	0	0
Germany	0.05	0.40	-1.11	0.04	10.42	0.07	5.87	0.00	0.16	0.04	0	0
Greece	0.00	0.69	-1.15	0.08	9.85	0.07	6.03	0.00	0.29	0.09	0	0
India	0.14	0.16	1.41	0.74	6.43	0.12	5.55	0.00	0.20	0.12	0	0
Indonesia	0.00	0.09	-1.02	0.69	7.10	0.08	4.31	0.00	0.24	0.08	0	0
Ireland	0.11	0.45	1.21	0.09	10.66	0.09	6.03	0.00	0.27	0.12	1	1
Israel	0.16	0.69	0.43	0.33	9.80	0.06	6.72	0.01	0.26	0.09	0	0
Italy	0.05	0.71	-1.34	0.04	10.30	0.06	6.54	0.00	0.24	0.04	0	1
Japan	0.02	0.15	0.78	0.01	10.36	0.04	5.67	0.00	0.18	0.03	0	0
Korea, Rep.	0.00	0.07	-0.09	0.00	9.74	0.07	6.88	0.00	0.22	0.08	0	0
Mexico	0.00	0.05	-1.49	0.17	8.87	0.10	7.35	0.00	0.23	0.09	0	1
Netherlands	0.25	0.45	-0.33	0.06	10.50	0.08	6.43	0.00	0.22	0.06	0	1
New Zealand	0.42	0.44	0.88	0.15	10.07	0.09	5.09	0.00	0.27	0.05	0	1
Norway	0.00	0.38	0.39	0.07	11.03	0.08	5.78	0.00	0.26	0.09	0	1
Philippines	0.00	0.53	-0.42	0.72	7.02	0.07	4.83	0.00	0.20	0.05	0	0
Portugal	0.00	1.02	-0.59	0.00	9.70	0.05	6.71	0.00	0.35	0.06	0	0
Singapore	0.13	0.38	0.83	0.32	10.15	0.07	4.66	0.00	0.15	0.07	0	1
South Africa	0.31	0.51	0.28	0.83	8.45	0.16	5.63	0.00	0.12	0.14	0	0
Spain	0.02	0.20	-0.04	0.27	10.11	0.07	6.55	0.00	0.22	0.08	0	1
Sweden	0.09	0.45	0.09	0.07	10.52	0.09	5.86	0.00	0.19	0.08	0	1
Switzerland	0.04	0.78	-0.71	0.31	10.78	0.07	6.22	0.00	0.22	0.04	0	1
Taiwan	0.00	0.18	0.40	0.26	9.53	0.06	6.16	0.01	0.23	0.07	0	1
Turkey	0.00	0.36	-0.93	0.16	8.33	0.11	6.37	0.00	0.16	0.26	0	1
United Kingdom	0.20	0.20	2.03	0.11	10.44	0.09	5.39	0.00	0.17	0.07	1	1
United States	0.40	0.22	2.10	0.21	10.59	0.10	6.55	0.00	0.21	0.09	1	1

This table provides the sample composition and selected median characteristics by country. The detailed definitions of the variables are provided in the Appendix. All continuous variables are trimmed at the 1 and 99 percentiles.

TABLE 2
Descriptive Statistics and Correlations

Panel A: Descriptive Statistics

	Mean	Median	Q1	Q3	Std Dev
TAXAVOID	0.060	0.065	-0.037	0.196	0.228
TAXAGGR	0.249	0.000	0.000	0.000	0.433
Private_TV	0.626	0.610	0.400	0.830	0.267
Comp_TV	0.381	0.510	0.140	0.510	0.229
Comp_Press	0.616	0.610	0.470	0.760	0.203
LEGAL	8.971	9.167	9.167	9.543	1.171
INFOENV	0.297	0.228	0.080	0.377	0.260
TAXRATE	0.380	0.400	0.330	0.417	0.075
WW	0.762	1.000	1.000	1.000	0.426
BTAXC	0.363	0.357	0.095	0.619	0.269
TAXENF	4.125	4.410	3.860	4.470	0.729
VARCOMP	0.158	0.091	0.024	0.312	0.154
EARNVOL	0.269	0.218	0.127	0.327	0.197
FACTOR	0.923	0.784	0.386	2.034	1.029
CULTURE	0.131	0.106	0.010	0.209	0.154
GDP	10.280	10.422	10.351	10.514	0.705
PROA	0.216	0.070	0.033	0.127	2.321
SIZE	6.034	5.885	4.791	7.166	1.812
R&D	0.014	0.000	0.000	0.010	0.034
LEV	0.215	0.195	0.059	0.331	0.182
GROWTH	0.312	0.054	-0.013	0.160	3.096
MULTI	0.199	0.000	0.000	0.000	0.399
BIGN	0.444	0.000	0.000	1.000	0.497

TABLE 2 (continued)

Panel B: Pearson Correlation for country-level variables (N=32)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	*Private_TV*	1.00													
(2)	*Comp_TV*	0.08	1.00												
(3)	*Comp_Press*	0.46	0.05	1.00											
(4)	*LEGAL*	-0.36	0.30	-0.26	1.00										
(5)	*INFOENV*	0.29	0.38	0.27	0.29	1.00									
(6)	*TAXRATE*	0.22	0.34	0.38	-0.03	0.12	1.00								
(7)	*WW*	0.35	0.02	0.20	-0.51	0.13	-0.11	1.00							
(8)	*BTAXC*	-0.07	0.02	-0.29	-0.09	-0.39	-0.27	-0.14	1.00						
(9)	*TAXENF*	-0.30	0.16	-0.28	0.67	0.13	-0.38	-0.16	-0.13	1.00					
(10)	*VARCOMP*	-0.15	0.13	0.02	0.38	0.28	0.17	-0.13	-0.47	0.48	1.00				
(11)	*EARNVOL*	-0.15	0.14	-0.18	0.26	0.05	0.16	-0.43	0.33	-0.19	-0.11	1.00			
(12)	*FACTOR*	-0.18	0.10	0.05	0.29	0.17	-0.23	0.25	-0.28	0.61	0.62	-0.41	1.00		
(13)	*CULTURE*	-0.12	-0.03	0.16	-0.51	-0.13	0.11	0.25	-0.19	-0.33	0.13	-0.14	0.05	1.00	
(14)	*GDP*	-0.22	0.30	-0.32	0.87	0.29	-0.05	-0.48	0.06	0.56	0.17	0.26	0.10	-0.71	1.00

Panel C: Pearson Correlation for firm-level variables (N=86,212)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1)	*TAXAVOID*	1.00								
(2)	*TAXAGGR*	0.58	1.00							
(3)	*PROA*	0.03	0.03	1.00						
(4)	*SIZE*	0.00	-0.04	0.02	1.00					
(5)	*R&D*	0.00	-0.01	0.01	0.00	1.00				
(6)	*LEV*	0.02	0.08	0.00	0.23	-0.15	1.00			
(7)	*GROWTH*	0.04	0.05	0.84	0.04	0.00	0.03	1.00		
(8)	*MULTI*	0.03	-0.04	-0.01	0.20	0.25	-0.02	-0.02	1.00	
(9)	*BIGN*	0.10	-0.05	-0.02	0.20	0.12	0.04	-0.02	0.42	1.00

This table provides the descriptive statistics (Panel A) and Pearson correlations for country- and firm- level variables (Panel B, C respectively) of the main variables used in this study. The detailed definitions of the variables are provided in the Appendix. All continuous variables are trimmed at the 1 and 99 percentiles. In Panel B, all correlations with absolute number greater than 0.51 are statistically significant at the 0.01 level or better (two-tailed). In Panel C, all correlations with absolute number greater than 0.01 are statistically significant at the 0.01 level or better (two-tailed).

TABLE 3
Media Independence and Corporate Tax Aggressiveness

Variables	(1) *Private_TV*	(2) *Comp_TV*	(3) *Comp_Press*
MEDIA	**-0.202**	**-0.563**	**-0.235**
	(-2.69)* **	**(-5.60)*** **	**(-2.40)** **
TAXRATE	0.946	1.683	0.992
	(3.83)***	(5.95)***	(3.82)***
WW	-0.174	-0.287	-0.158
	(-3.58)***	(-5.48)***	(-3.28)***
BTAXC	-0.129	-0.064	-0.128
	(-1.89)*	(-0.95)	(-1.88)*
TAXENF	-0.079	-0.041	-0.086
	(-2.19)**	(-1.13)	(-2.32)**
VARCOMP	0.753	0.663	0.576
	(3.19)***	(3.08)***	(2.65)***
EARNVOL	0.600	0.640	0.626
	(9.16)***	(9.70)***	(9.46)***
FACTOR	-0.050	-0.035	-0.073
	(-1.42)	(-1.01)	(-1.99)**
CULTURE	0.176	0.573	0.302
	(1.05)	(3.46)***	(1.89)*
GDP	0.137	0.226	0.144
	(3.54)***	(5.45)***	(3.74)***
TREND	-0.001	0.001	-0.001
	(-0.18)	(0.34)	(-0.30)
PROA	-0.019	-0.019	-0.018
	(-2.62)***	(-2.59)***	(-2.58)***
SIZE	-0.085	-0.083	-0.083
	(-9.84)***	(-9.60)***	(-9.53)***
R&D	0.490	0.612	0.490
	(1.22)	(1.51)	(1.21)
LEV	1.290	1.301	1.286
	(17.62)***	(17.76)***	(17.56)***
GROWTH	0.043	0.043	0.043
	(7.28)***	(7.26)***	(7.26)***
MULTI	-0.260	-0.264	-0.261
	(-6.18)***	(-6.30)***	(-6.22)***
BIGN	-0.229	-0.213	-0.233
	(-6.31)***	(-5.91)***	(-6.45)***
Constant	-2.518	-4.008	-2.579
	(-6.27)***	(-8.73)***	(-6.46)***
Observations	86,212	86,212	86,212
Pseudo R^2	0.0261	0.0267	0.0261

This table reports the regression results of the relation between media independence (*MEDIA*) and tax aggressiveness (*TAXAGGR*). Column 1 shows the results when media independence is proxied by *Private_TV*; Column 2 shows the results when media independence is proxied by *Comp_TV*; and Column 3 shows the results when media independence is proxied by *Comp_Press*. The regressions include year and industry fixed effects. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year, industry and country indicator variables are not tabulated for brevity. The z-statistics reported in parentheses are based on standard errors clustered by firm to control for cross-sectional dependence in the data. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 4
Media Independence and Corporate Tax Aggressiveness – The Role of Legal Institutions

Variables	(1) *Private_TV*	(2) *Comp_TV*	(3) *Comp_Press*
MEDIA	-0.509	-0.561	-0.259
	(-4.91)***	(-5.49)***	(-2.55)**
MEDIA*LEGAL	**0.214**	**0.173**	**0.052**
	(4.27)* **	**(2.37)** **	**(0.51)**
LEGAL	-0.094	-0.046	-0.044
	(-3.35)***	(-1.71)*	(-0.84)
TAXRATE	1.736	1.825	1.177
	(5.86)***	(6.31)***	(4.26)***
WW	-0.105	-0.241	-0.133
	(-2.04)**	(-4.13)***	(-2.36)**
BTAXC	-0.189	-0.082	-0.152
	(-2.74)***	(-1.21)	(-2.23)**
TAXENF	-0.119	-0.042	-0.048
	(-2.84)***	(-1.01)	(-1.19)
VARCOMP	0.969	0.509	0.577
	(3.96)***	(2.18)**	(2.47)**
EARNVOL	0.597	0.682	0.675
	(8.84)***	(10.14)***	(10.11)***
FACTOR	-0.139	-0.066	-0.083
	(-3.58)***	(-1.67)*	(-2.12)**
CULTURE	0.223	0.541	0.367
	(1.32)	(3.22)***	(2.16)**
GDP	0.246	0.249	0.233
	(4.86)***	(4.75)***	(3.85)***
TREND	0.000	0.001	-0.003
	(0.01)	(0.29)	(-0.63)
PROA	-0.019	-0.019	-0.019
	(-2.61)***	(-2.63)***	(-2.61)***
SIZE	-0.082	-0.084	-0.083
	(-9.39)***	(-9.67)***	(-9.52)***
R&D	0.586	0.604	0.517
	(1.45)	(1.49)	(1.28)
LEV	1.294	1.298	1.285
	(17.65)***	(17.72)***	(17.55)***
GROWTH	0.043	0.043	0.043
	(7.20)***	(7.22)***	(7.22)***
MULTI	-0.286	-0.264	-0.268
	(-6.74)***	(-6.29)***	(-6.35)***
BIGN	-0.250	-0.214	-0.233
	(-6.83)***	(-5.94)***	(-6.47)***
Constant	-4.004	-4.480	-3.883
	(-6.81)***	(-7.06)***	(-5.44)***
Observations	86,212	86,212	86,212
Pseudo R^2	0.0267	0.0268	0.0262

This table reports the regression results of the role of legal enforcement (*LEGAL*) on the relation between media independence (*MEDIA*) and tax aggressiveness (*TAXAGGR*). Column 1 shows the results when media independence is proxied by *Private_TV*; Column 2 shows the results when media independence is proxied by *Comp_TV*; and Column 3 shows the results when media independence is proxied by *Comp_Press*. The regressions include year and industry fixed effects. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year, industry and country indicator variables are not tabulated for brevity. The z-statistics reported in parentheses are based on standard errors clustered by firm to control for cross-sectional dependence in the data. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 5
Media Independence and Corporate Tax Aggressiveness – The Role of Information Environment

	(1)	(2)	(3)
Variables	*Private_TV*	*Comp_TV*	*Comp_Press*
MEDIA	-0.492	-1.012	-0.614
	(-5.07)***	(-8.01)***	(-4.84)***
MEDIA*INFOENV	**1.563**	**1.604**	**1.683**
	(2.84)* **	**(2.49)** **	**(2.43)** **
INFOENV	-0.827	-0.761	-0.866
	(-4.24)***	(-5.02)***	(-4.64)***
TAXRATE	1.669	2.689	1.634
	(5.86)***	(8.11)***	(5.62)***
WW	-0.106	-0.225	-0.055
	(-1.98)**	(-4.25)***	(-1.00)
BTAXC	0.005	0.073	0.008
	(0.07)	(1.05)	(0.12)
TAXENF	-0.065	-0.042	-0.056
	(-1.61)	(-1.03)	(-1.35)
VARCOMP	0.583	0.677	0.181
	(2.19)**	(1.94)*	(0.65)
EARNVOL	0.547	0.618	0.565
	(8.14)***	(9.19)***	(8.39)***
FACTOR	-0.100	-0.074	-0.125
	(-2.60)***	(-1.96)**	(-2.99)***
CULTURE	0.026	0.624	0.236
	(0.15)	(3.62)***	(1.39)
GDP	0.089	0.206	0.085
	(1.91)*	(4.42)***	(1.84)*
TREND	0.006	0.007	0.004
	(1.24)	(1.66)*	(0.96)
PROA	-0.019	-0.019	-0.019
	(-2.40)**	(-2.39)**	(-2.33)**
SIZE	-0.087	-0.087	-0.084
	(-9.87)***	(-9.85)***	(-9.50)***
R&D	0.413	0.519	0.402
	(1.02)	(1.28)	(0.99)
LEV	1.278	1.286	1.270
	(17.22)***	(17.29)***	(17.11)***
GROWTH	0.044	0.044	0.043
	(6.74)***	(6.72)***	(6.74)***
MULTI	-0.273	-0.273	-0.280
	(-6.46)***	(-6.50)***	(-6.60)***
BIGN	-0.238	-0.245	-0.250
	(-6.30)***	(-6.59)***	(-6.61)***
Constant	-2.416	-4.608	-2.360
	(-5.20)***	(-8.68)***	(-5.04)***
Observations	85,135	85,135	85,135
Pseudo R^2	0.0270	0.0280	0.0269

This table reports the regression results of the role of information environment (*INFOENV*) on the relation between media independence (*MEDIA*) and tax aggressiveness (*TAXAGGR*). Column 1 shows the results when media independence is proxied by *Private_TV*; Column 2 shows the results when media independence is proxied by *Comp_TV*; and Column 3 shows the results when media independence is proxied by *Comp_Press*. The regressions include year and industry fixed effects. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year, industry and country indicator variables are not tabulated for brevity. The z-statistics reported in parentheses are based on standard errors clustered by firm to control for cross-sectional dependence in the data. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 6
Media Independence and Tax Aggressiveness – Instrumental Variable (2SLS) Approach

	First-stage Dependent variable: *MEDIA*			Second-stage Dependent variable: *TAXAGGR*		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	*Private_TV*	*Comp_TV*	*Comp_Press*	*Private_TV*	*Comp_TV*	*Comp_Press*
MEDIA				**-0.449**	**-0.550**	**-1.213**
				(-5.03)***	**(-5.27)*****	**(-3.88)*****
Democracy	0.020	0.016	0.007			
	(12.85)***	(22.68)***	(5.85)***			
TAXRATE	1.269	1.501	0.989	0.336	1.061	1.435
	(39.68)***	(56.11)***	(27.28)***	(3.30)***	(5.72)***	(4.07)***
WW	-0.131	-0.270	-0.061	-0.040	-0.168	-0.093
	(-17.87)***	(-51.87)***	(-9.95)***	(-2.47)**	(-6.08)***	(-5.18)***
BTAXC	0.042	0.183	0.086	-0.063	-0.057	-0.061
	(4.04)***	(28.89)***	(10.61)***	(-4.39)***	(-2.74)***	(-2.21)**
TAXENF	-0.098	0.051	-0.103	-0.025	-0.009	-0.144
	(-18.54)***	(17.45)***	(-21.91)***	(-2.50)**	(-1.23)	(-4.07)***
VARCOMP	1.419	0.449	0.519	0.576	0.309	0.692
	(36.12)***	(23.32)***	(26.14)***	(4.23)***	(5.19)***	(4.21)***
EARNVOL	-0.130	-0.028	-0.066	0.194	0.120	0.056
	(-15.48)***	(-5.75)***	(-11.11)***	(10.47)***	(10.30)***	(2.43)**
FACTOR	-0.010	0.056	-0.080	-0.016	-0.011	-0.117
	(-1.66)*	(15.46)***	(-16.92)***	(-2.24)**	(-1.44)	(-3.89)***
CULTURE	-0.420	0.633	0.237	0.215	0.375	0.314
	(-12.20)***	(27.68)***	(8.44)***	(4.55)***	(5.33)***	(4.10)***
GDP	0.049	0.150	0.049	0.014	0.119	0.096
	(6.37)***	(37.41)***	(11.69)***	(1.83)*	(6.03)***	(5.02)***
TREND	0.007	0.007	0.004	-0.004	0.003	0.004
	(21.61)***	(29.47)***	(12.40)***	(-3.50)***	(2.96)***	(2.53)**
PROA	-0.000	0.000	0.002	-0.004	-0.004	-0.002
	(-0.56)	(1.80)*	(4.54)***	(-2.82)***	(-2.73)***	(-1.51)
SIZE	0.000	0.004	0.010	-0.016	-0.014	-0.004
	(0.38)	(6.20)***	(12.49)***	(-10.01)***	(-8.46)***	(-1.15)
R&D	0.418	0.328	0.336	-0.100	0.268	0.496
	(11.00)***	(10.92)***	(9.24)***	(-1.18)	(3.22)***	(3.64)***
LEV	0.042	0.028	0.017	0.221	0.255	0.261
	(6.10)***	(5.94)***	(2.99)***	(14.88)***	(17.51)***	(15.77)***
GROWTH	0.001	-0.000	-0.001	0.009	0.009	0.008
	(1.75)*	(-0.05)	(-3.22)***	(7.85)***	(8.09)***	(7.20)***
MULTI	-0.052	-0.024	-0.050	-0.020	-0.057	-0.105
	(-15.50)***	(-7.96)***	(-15.22)***	(-2.31)**	(-7.32)***	(-5.98)***
BIGN	0.019	0.037	0.006	-0.056	-0.027	-0.040
	(4.10)***	(12.32)***	(1.68)*	(-7.73)***	(-3.65)***	(-5.18)***
Observations	86,212	86,212	86,212	86,212	86,212	86,212
Adj. R^2/Pseudo R^2	0.616	0.724	0.570	-0.017	0.005	-0.111

This table reports the regression results of the relation between media independence (*MEDIA*) and tax aggressiveness (*TAXAGGR*), based on an instrumental variable (2SLS) approach. In Columns (1) – (3), we report the results of the first-stage regression, where we regress *MEDIA* on the instrument, *Democracy*, and other control variables in the main regression. In Columns (4) – (6), we report the second-stage results using the predicted value of *MEDIA* from the first-stage. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year and industry indicator variables are not tabulated for brevity. The t-statistics (Columns 1 to 3) and z-statistics (Columns 4 to 6) reported in parentheses are based on standard errors clustered by firm to control for cross-sectional dependence in the data. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 7
Media Independence and Tax Aggressiveness – The Role of Audience Sophistication

	(1) *Private_TV*	(2) *Comp_TV*	(3) *Comp_Press*
MEDIA	-5.057	-4.637	-0.540
	(-4.05)***	(-4.66)***	(-0.53)
MEDIA*Education	**-10.497**	**-8.968**	**0.607**
	(-4.17)* **	**(-5.71)*** **	**(0.27)**
Education	-3.419	-4.255	-1.018
	(-5.89)***	(-7.05)***	(-2.50)**
TAXRATE	3.958	5.763	3.229
	(7.44)***	(9.21)***	(6.59)***
WW	-0.361	-0.152	-0.269
	(-2.70)***	(-1.10)	(-2.15)**
BTAXC	-1.105	-1.069	-0.845
	(-8.17)***	(-7.60)***	(-6.25)***
TAXENF	-0.596	-0.317	-0.006
	(-4.36)***	(-4.93)***	(-0.05)
VARCOMP	2.334	1.382	0.968
	(2.46)**	(2.27)**	(1.82)*
EARNVOL	0.275	0.235	0.219
	(2.63)***	(2.24)**	(2.11)**
FACTOR	-0.095	-0.094	-0.111
	(-1.00)	(-1.29)	(-1.32)
CULTURE	2.255	0.422	1.347
	(2.43)**	(1.12)	(3.37)***
GDP	0.190	0.048	0.147
	(1.80)*	(0.65)	(2.04)**
TREND	0.005	0.019	0.012
	(0.85)	(3.13)***	(1.96)**
PROA	-0.009	-0.009	-0.008
	(-1.16)	(-1.20)	(-1.06)
SIZE	-0.062	-0.063	-0.060
	(-5.41)***	(-5.53)***	(-5.26)***
R&D	1.240	1.336	1.226
	(2.46)**	(2.63)***	(2.44)**
LEV	1.615	1.612	1.613
	(17.84)***	(17.79)***	(17.82)***
GROWTH	0.034	0.034	0.033
	(5.70)***	(5.66)***	(5.64)***
MULTI	-0.111	-0.122	-0.109
	(-1.93)*	(-2.12)**	(-1.89)*
BIGN	-0.251	-0.289	-0.225
	(-3.85)***	(-4.42)***	(-3.49)***
Constant	-4.381	-2.033	0.242
	(-3.42)***	(-2.69)***	(0.32)
Observations	56,834	56,834	56,834
Pseudo R^2	0.0275	0.0281	0.0269

This table reports the regression results of the role of education level (*Education*) on the relation between media independence (*MEDIA*) and tax aggressiveness (*TAXAGGR*). The regressions include year and industry fixed effects. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year, industry and country indicator variables are not tabulated for brevity. The z-statistics reported in parentheses are based on standard errors clustered by firm to control for cross-sectional dependence in the data. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 8
Controlling for Differential Country Representation in the Sample

	Weighted least squares regression			Country-year regressions		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	*Private_TV*	*Comp_TV*	*Comp_Press*	*Private_TV*	*Comp_TV*	*Comp_Press*
MEDIA	**-0.053**	**-0.074**	**-0.082**	**-0.023**	**-0.073**	**-0.082**
	(-6.38)***	**(-4.49)*****	**(-7.06)*****	**(-1.27)**	**(-2.25)****	**(-3.43)*****
TAXRATE	-0.045	0.003	-0.000	-0.051	0.016	-0.007
	(-1.28)	(0.07)	(-0.01)	(-0.65)	(0.19)	(-0.09)
WW	-0.028	-0.025	-0.012	-0.016	-0.018	-0.010
	(-3.98)***	(-3.58)***	(-1.74)*	(-1.21)	(-1.41)	(-0.81)
BTAXC	-0.029	-0.021	-0.036	-0.066	-0.053	-0.073
	(-3.51)***	(-2.57)**	(-4.37)***	(-3.78)***	(-2.96)***	(-4.22)***
TAXENF	-0.039	-0.034	-0.040	-0.034	-0.030	-0.034
	(-9.89)***	(-8.66)***	(-10.07)***	(-4.25)***	(-3.84)***	(-4.49)***
VARCOMP	0.337	0.310	0.304	0.353	0.339	0.327
	(12.20)***	(11.20)***	(11.22)***	(6.42)***	(6.28)***	(6.09)***
EARNVOL	-0.007	-0.000	-0.009	0.028	0.032	0.024
	(-0.79)	(-0.04)	(-0.94)	(1.51)	(1.70)*	(1.30)
FACTOR	-0.008	-0.005	-0.001	-0.010	-0.013	0.001
	(-2.11)**	(-1.24)	(-0.33)	(-1.33)	(-1.61)	(0.09)
CULTURE	0.059	0.001	0.034	0.054	-0.019	-0.024
	(3.20)***	(0.05)	(1.97)**	(1.61)	(-0.57)	(-0.73)
GDP	0.010	0.001	0.011	-0.006	-0.000	-0.006
	(2.49)**	(0.24)	(2.73)***	(-0.67)	(-0.03)	(-0.68)
TREND	-0.005	-0.006	-0.005	-0.005	-0.005	-0.005
	(-5.54)***	(-6.03)***	(-5.75)***	(-3.14)***	(-3.20)***	(-3.11)***
PROA	-0.002	-0.002	-0.002	-0.025	-0.024	-0.022
	(-2.12)**	(-2.06)**	(-1.99)**	(-1.40)	(-1.37)	(-1.24)
SIZE	-0.003	-0.002	-0.001	0.008	0.009	-0.017
	(-1.86)*	(-1.60)	(-0.93)	(1.12)	(1.37)	(-2.41)**
R&D	-0.016	-0.014	-0.029	-0.984	-0.615	-1.036
	(-0.17)	(-0.15)	(-0.32)	(-1.74)*	(-1.04)	(-1.88)*
LEV	0.007	0.006	0.003	0.264	0.272	0.273
	(0.53)	(0.42)	(0.21)	(2.61)***	(2.72)***	(2.75)***
GROWTH	0.003	0.003	0.003	0.031	0.030	0.028
	(3.35)***	(3.32)***	(3.20)***	(2.14)**	(2.10)**	(1.97)**
MULTI	-0.032	-0.030	-0.037	-0.010	0.017	-0.040
	(-4.54)***	(-4.04)***	(-5.14)***	(-0.27)	(0.45)	(-1.03)
BIGN	-0.039	-0.042	-0.042	-0.082	-0.083	-0.080
	(-7.23)***	(-7.92)***	(-7.96)***	(-5.20)***	(-5.36)***	(-5.18)***
Constant	0.408	0.237	0.425	0.387	0.275	0.353
	(7.71)***	(4.21)***	(8.23)***	(3.75)***	(2.53)**	(3.52)***
Observations	86,212	86,212	86,212	342	342	342
Pseudo R^2/ Adj. R^2	0.075	0.074	0.076	0.326	0.334	0.347

This table reports the regression results of additional analysis that controls for differential country sample. Columns (1) to (3) show the results by employing the weighted least square estimation to control for different country size in the sample, where higher (lower) weights are given to countries with smaller (greater) sample size. Columns (4) to (6) show the regression results for country-year regressions, such that each country-year observation receives equal weight in the regression. The z-statistics (Columns 1 to 3) and t-statistics (Columns 4 to 6) reported in parentheses are based on standard errors clustered by firm to control for cross-sectional dependence in the data. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.