CEO Political Affiliation and Firms' Tax Avoidance

Bill B. Francis
Lally School of Management and Technology
Rensselaer Polytechnic Institute
110 8th Street, Pittsburgh Building
Troy, NY 12180-3590
Telephone: 518-276-3908
E-mail: francb@rpi.edu

Iftekhar Hasan
Schools of Business
Fordham University
1790 Broadway, 11th Floor
New York, NY 10019
Telephone: 646-312-8278
Email: ihasan@fordham.edu

Xian Sun
Carey Business School
Johns Hopkins University
100 N. Charles Street
Baltimore, MD 21201
Telephone: 410-576-2891
E-mail: xian.sun@jhu.edu

This Version : May 2012

(First Draft : January, 2012)

1

Abstract

This paper studies the effects of CEOs' political preferences on corporate tax avoidance. CEOs' party affiliations are identified by their political donations during election cycles. Using four measures of tax avoidance from the literature (book-to-tax difference, shelter activities, permanent tax avoidance, and total tax avoidance), we find that firms led by Republican CEOs have significantly higher levels of tax avoidance by all measures, as opposed to firms led by CEOs with no obvious political preferences. These differences are particularly true when the CEO's equity-based incentives are low, suggesting that risk incentives do not drive our findings. On the other hand, Democratic CEOs are associated with higher book-to-tax difference and more shelter activities, especially when CEOs' risk incentives are high. These results suggest that Republican CEOs' tax decisions are driven by political preferences and that Democratic CEOs' tax decisions are driven by risk incentives. We also find some evidence to support a view of Democratic CEOs as aggressive in making tax policies. The results of the firm and CEO fixed-effect regressions confirm that it is the Republican CEOs' political preference that causes significant changes in terms of firm-level discretionary tax avoidance. A similar pattern does not hold for Democratic CEOs. The robustness analysis of the 2003 dividend tax cut suggests that the significantly higher tax avoidance associated with Republican CEOs is not driven by this policy change. Lastly, the fixed-effect of Republican CEOs on tax avoidance is especially significant among well-governed firms.

"Here is my principle: Taxes shall be levied according to ability to pay. That is the only American principle."
--------- Franklin Delano Roosevelt

"We believe the American people can spend their money better than the government can spend it."
--------- George W. Bush

1. Introduction

Taxation is an important component in the development of most countries in terms of economic growth and the well-being of their citizens. As such, taxation has attracted significant attention from multiple disciplines, including economics, finance, accounting, law, and political science (see the comprehensive review by Hanlon and Heitzman (2010)). Despite this unquestionable importance, many issues remain puzzling or unexplored. For example, in studying questions such as why people pay taxes (in order to therefore estimate who may not), a utility-maximization approach is often assumed. In line with this economics-of-crime approach, Allingham and Sandmo (1972) present a formal model to predict tax noncompliance. The main criticism of this approach, however, is that these deterrence models predict too little tax compliance and too much tax evasion (e.g., Alm et al (1992)).

A similar phenomenon observed in studies of corporate tax reporting is that of "under-sheltering." Weisbach (2002) calls this lack of sheltering puzzling, given that there are a variety of tax shelters that allow taxpayers to reduce taxes at low economic cost. To address this issue, the literature has suggested factors other than economic ones, such as morale (Schwarts and Orleans (1967), Roth et al. (1989), Torgler (2007) etc.), fairness (e.g., Bordignon (1993)), risk aversion (Alm et al. (1992)), and the relationship between taxpayers and government (Spicer and Lundsedt (1976) and Smith (1992)). The lattermost factor reflects how taxpayers' opinion toward government shapes their tax compliance behaviors.

3

While the issue of tax compliance has been studied extensively for individuals in public economics (Slemrod and Yitzhaki (2002)), the literature on corporate tax compliance is relatively young. We attempt to shed light on this issue by examining the effect(s) of a CEO's political affiliation on corporate tax policies. There are several reasons why this issue is important. First, the recent literature indicates that top managers influence firms' decisions about tax policies (see, e.g., Desai and Dharmapala (2006), Dyreng, Hanlon and Maydew (2010), Rego and Wilson (2011) and Armstrong, Blouin and Larcker (2011)). Among these studies, Dryeng, Hanlon and Maydew's (2010) is the closest to ours, in that they focus on the individual impact of CEOs. By examining a group of executives that switch firms, they find that CEOs play a significant role in determining tax avoidance that cannot be explained by firm characteristics. Although this study is an important first step in examining the individual managers' effects on tax avoidance, it does not conclusively explain the variation among managers' individual effects. Dyreng, Hanlon and Maydew (2010) find that common observable characteristics such as education, gender, age, and tenure are *not* associated with executives' propensities to reduce taxes.

Second, the literature implies that individuals' political beliefs may influence their willingness to pay taxes. For example, Spicer and Lundsedt (1976) and Smith (1992) suggest that taxpayers will feel cheated if they believe the government is not spending its revenue appropriately.[1] When there are significant discrepancies between individuals' beliefs regarding the size and efficiency of government and beliefs regarding the fairness and effectiveness of wealth distribution, it may impact their tax avoidance decisions. For example, in the United States there is significant disagreement between Republicans and Democrats on tax issues. A

---

[1] This viewpoint is captured in a statement made by the CEO of Bank of American who noted that Bank of America and its wealthy banking clients were ready to pay higher taxes if the increased collected revenue was used by the United States government to put its fiscal house back in order (Reuters, October 6th, 2011).

Gallup Poll on April 11, 2011, as to whether the rich should be taxed more heavily reported that a substantial majority of Democrats (71%) endorse the idea of redistributing wealth by increasing taxes on the rich. In contrast, 69% of Republicans were against increasing taxes on the rich. Given these findings, the following question is raised: To what extent is the tax policy of a firm impacted by the political affiliation of a firm's managers? The political preferences hypothesis suggests that Republican CEOs should be associated with more tax avoidance, and correspondingly, Democratic CEOs should be associated with less tax avoidance.

A competing hypothesis regarding the individual effects of CEOs on tax avoidance stems from the personality of the CEOs. Alm et al. (1992) find that some individuals pay taxes because they overweight the probability of an audit and being caught. Such overweighting could be even more obvious among conservative individuals, who in general prefer stability and continuity and therefore are less likely to take actions that may disrupt such a balance. Since the majority of Republicans identify themselves as conservatives, the overweighting hypothesis suggests that they should avoid less tax, given everything else equal. Democrats, in contrast, may avoid more tax because they are less conservative and are more risk tolerant (Kam and Simas (2010)).[2]

A key factor that needs to be controlled when studying the individual effects of CEOs is CEO compensation. The literature suggests that executives with more risk incentives are associated with riskier firm policies (Coles et al. (2006) and Low (2009), among others) and, as is particularly relevant to this study, more aggressive tax policies (e.g., Rego and Wilson (2011)). Both the political preference hypothesis and the conservatism hypothesis, however, suggest effects in addition to economic reasons. Therefore, if there are any individual effects of CEOs

---

[2] The Gallup poll reports that only 22% of Democrats are conservatives, while 73% of Republicans are conservatives.

they should not be driven by the effects of CEO compensation and should be supported by the evidence even when the economic incentives are low.

We use four measures of tax avoidance from the extant literature. First, because we are interested in executive individual effects, we choose two tax avoidance proxies that are considered to measure the discretional portion of tax planning: *DTAX*, which measures the permanent portion of corporate tax avoidance (Frank et al. (2009)); and *DD_TA*, which measures the total tax avoidance, excluding the effects of earning management (Desai and Dharmapala (2006)). Second, we choose a proxy for sheltering. Following Wilson (2009), we identify firms that are the most likely to engage in sheltering activities. It should be pointed out that a weakness of this measure is that it may not capture the overall level of tax avoidance but, instead may capture an extreme case of tax planning.[3] Lastly, we use a book-to-tax difference measure that is used by Wilson (2009). Although it includes information such as earning management and/or unintentional tax avoidance activities, unlike the previous three measures, this one is relatively straightforward and free from model specifications. In sum, the tax avoidance measures we choose from the literature are representative and range from the less aggressive end to the more aggressive end of the tax avoidance continuum.

To determine a CEO's political affiliation, we match the ExecuComp database with the Federal Election Commission database.[4] Most CEOs that make donations during an election cycle (about 24% of the total sample) donate to a single party (about 13% to Republican committees and 5% to Democratic committees) or the rest to a nonparty committee (such as a commercial committee). The donation amount is usually small as compared to their annual compensation (about 0.03%). This method of identifying individuals' political preference has

---

[3] Please see Hanlon et al. (2010)'s detailed discussion of the various tax avoidance measures.
[4] See: www.fec.gov

been used by several other studies (Chin et al. (2009), Hong et al. (2010), Bonaparte et al. (2010), and Hutton et al. (2011)).

We find that firms with Republican CEOs have significantly higher tax avoidance in all measures when compared to those CEOs with no obvious political preferences. These differences are especially significant when CEOs' incentives are low. We measure CEOs' incentives by vega (the dollar sensitivity of CEOs' wealth to the stock volatility), delta (the dollar sensitivity of CEOs' wealth to stock prices) and the value of options granted in percentage of CEOs' total annual compensation. The fact that firms with Republican CEOs avoid more taxes even when the CEOs' economic incentives to do so are low supports the political preference hypothesis.

Firms with Democratic CEOs are associated with higher book-to-tax difference and a higher likelihood of sheltering activities, but are not associated with the other two measures of discretionary tax avoidance. The positive relationship between tax avoidance and Democratic CEOs does not support the predictions of the political preference hypothesis. When breaking down the sample by CEOs' economic incentives, we find that the positive relationship is especially evident when a CEO's delta and option compensation are high, suggesting that economic incentives might be the main drivers of Democratic CEOs' tax decisions.

The results of the OLS regressions show that CEOs' political affiliations explain the cross-sectional differences in tax avoidance significantly. Specifically, after controlling for factors such as size, discretionary earning management, CEO incentives, temporary tax expense, and year and industry effects, the coefficient of Republican CEO is positive and significant in all 4 measures of tax avoidance. The coefficient of Democratic CEO is positive and significant in many models, too, except for *BTD* and *DTAX*. When we split the sample by the median value of

7

delta, we find evidence confirming the political preference hypothesis of Republican CEOs, in that the effects of Republican CEOs are particularly significant in the subsample with low delta. The effects of Democratic CEOs, in contrast, are particularly driven by the subsample with high delta.

To examine whether the significant differences across firms with CEOs of different political preferences are driven by an unobservable firm or CEO characteristic, we run firm-fixed regressions for all the firms that do not change CEOs during the sample period. Therefore, the sign and significance of the coefficients of Republican dummy or Democratic dummy would suggest that controlling firm and CEO fixed-effects, whether the change of CEO's political affiliation causes significant changes in the firm's tax avoidance. The results show that when CEOs start (stop) donating to Republicans, their firms experience significantly more (less) total tax avoidance (*DD_TA*) and permanent tax avoidance *(DTAX)*. A similar pattern, however, does not exist when CEOs become Democratic. These results confirm that Republican CEOs' political beliefs determine the firms' tax avoidance, especially as regards the discretionary portions.

As a robustness test, we introduce the presidential approval rating into the regressions. The trends show that each president receives significantly higher approval ratings from his own party followers and significantly lower approval ratings from their counterparty's party followers. Approval ratings by independent voters are in the middle. The results of the firm and CEO fixed-effect regressions show that during President Bush's terms, firms' tax avoidance (except for *DTAX*) increased with the voters' president approval ratings. Since President Bush urged significant tax cuts, our results confirm our hypothesis that CEOs' political opinions determine firms' tax avoidance. One of President Bush's important tax policies was the 2003 dividend tax cut. We examine whether our findings are driven by this policy change. We find that in general

8

firms experience even higher tax avoidance after the 2003 tax cut. The positive effect of Republican CEOs on tax avoidance, however, holds in both periods.

Lastly, because of the separation of ownership and control, the effects of a CEO's political affiliation on tax avoidance should be examined within an agency framework (Slemrod (2004), Chen and Chu (2005), Crocker and Slemrod (2005), and Hanlon et al. (2010)). To understand the dynamics between corporate governance and CEOs' political preferences, we test our research question in both well-governed firms and poorly-governed firms. The results of the fixed-effect regressions show that when CEOs become Republican, their firms experience significantly higher discretionary tax avoidance (*DTAX* and *DD_TA*) and these results only exist among well-governed firms. If tax avoidance adds value to shareholders, managers in well-governed firms ought to engage in more aggressive tax planning so as to increase the after-tax wealth of the firm's owners. Our results suggest that the political preferences of Republican CEOs magnify such incentives in well-governed firms.

In sum, the results support the political preference hypothesis in explaining Republican CEOs' effects on firms' tax avoidance. Democratic CEOs, who are associated with certain measures of higher tax avoidance, seem to be mainly motivated by risk incentives. To our knowledge, our paper is among the first that provides empirical evidence on how individuals' political belief influence their decisions on tax avoidance behaviors. Since our study is conducted in the context of the corporation, our results shed light on the relatively young literature of the determinants of corporate tax avoidance.

The rest of the paper proceeds as follows. Section 2 explains our hypotheses development. Section 3 describes the data and methodology. Section 4 presents the summary statistics of the results. Section 5 presents the regression results. Section 6 concludes.

2. Hypotheses Development

There are two competing hypotheses of the CEO effects on tax avoidance studied in this paper: the political preference hypothesis versus the conservatism hypothesis. Table 1 shows the predicted signs of the CEO effects on tax avoidance under each hypothesis.

[Insert Table 1 Here]

Specifically, according to the political preference hypothesis, Republican CEOs are associated with more tax avoidance and Democratic CEOs with less tax avoidance. Because political preference implies a behavior that is not necessarily explained by economic motivations, we speculate that the expected CEO effects should be particularly significant, if not more so, when the economic incentives are low. We articulate the political preference hypotheses in the following:

Political Preference Hypothesis 1.1: Republican CEOs are associated with more tax avoidance and this positive effect should be even more evident when economic incentives of doing so are low.

Political Preference hypothesis 1.2: Democratic CEOs are associated with less tax avoidance and this negative effect should be even more evident when the economic incentives of doing so are low.

The conservatism (or aggressiveness) hypothesis suggests that CEOs outweigh (or underweigh) the likelihood of being audited and caught when making tax decisions. The outweighing or underweighting effect should not be driven by CEOs' risk incentives and should be particularly true when such incentives are low.

We articulate the conservatism/aggressiveness hypotheses in the following:

Conservatism Hypothesis 2.1: Republican CEOs are associated with less tax avoidance and this negative effect should be even more evident when economic incentives of doing so are low.

Aggressiveness Hypothesis 2.2: Democratic CEOs are associated with more tax avoidance and this positive effect should be even more evident when the economic incentives of doing so are low.

The individual effects of CEOs on tax avoidance are not conclusive when their economic incentives are high under either hypothesis. Whether those individual effects and the economic effects are additive or not is an empirical question. For example, will Republican CEOs avoid even more taxes than independent CEOs, when the economic incentives of doing so are high already? We articulate those effects in the following:

Hypothesis 3.1: The individual effects of the CEOs under each hypothesis could be magnified (hypotheses 1.1 and 2.2), mitigated (hypotheses 1.2 and 2.1), or disappear when the economic incentives are high.

The goal of the following analyses and tests is to determine which hypotheses, if any, explain CEOs' effects on tax avoidance.

3. Data and Methodology

We integrate several databases to study the effects of CEOs on tax avoidance. First, we start with the Compustat database to simulate various measures of tax avoidance. Firms with SIC codes between 6000-6999 are excluded. These measures are then matched to the ExecuCom database because of our interest in CEOs' specific information. CEO compensation and economic

11

incentives are calculated from ExecuCom as well. After searching the records of all individual political donations from the Federal Election Commission website, we identify the amount of donations CEOs made during each election cycle and the party to which they donate. Poll results on Presidential job approval ratings are collected from Gallup to measure CEOs' opinions of the incumbent President. Lastly, we use an entrenchment index developed by Bebchuk, Cohen, and Ferrell (2009) to measure the quality of corporate governance. We describe the data and the construction of the key variables in detail in this section.

3.1 Measuring Tax Avoidance

Because taxable income is not disclosed in financial statements and because corporate tax return information is not publicly available, most studies on this topic rely on the estimated tax avoidance from financial statement data. Researchers have developed a wide range of proxies in the literature and each may only be suitable for a certain type of research question. Given that the literature is relatively young and the significant policy implications of research on tax avoidance, Hanlon et al. (2010) highlight the importance of the choice of the measure of tax avoidance in their thorough review of the main proxies.

Since we are interested in the effects of CEOs, we first choose tax avoidance measures that are considered to capture the discretionary portion. The first is *DD_TA* developed by Desai and Dharmapala (2006), which measures the abnormal book-tax difference after taking out the impacts of total accruals; the second is *DTAX*, developed by Frank et al. (2009), which estimates the discretionary permanent book-to-tax difference. While both are suitable for studies of

discretionary tax avoidance, one obvious difference between them is *DD_TA* includes temporary tax difference and *DTAX* does not.

We then choose the model for predicting sheltering activities developed by Wilson (2009). This model captures a firm's likelihood of engaging in specific sheltering transactions but not necessarily the overall tax avoidance. The fourth measure we consider is *BTD,* the total book-to-tax difference, which is estimated without using models. We describe the details of the construction of each measure below by beginning with the relatively straightforward *BTD*.

3.1.1 *BTD*

Following Wilson (2009), *BTD* is the total book-tax difference, which equals book income less taxable income scaled by lagged assets. Book income is pretax income (PI) in year t. Taxable income is calculated by summing the current federal tax expense (TXFED) and current foreign tax expense (TXFO) and dividing by the statutory tax rate (0.35) and then subtracting the change in NOL carryforwards (TLCF) in year t.

$$BTD_{it}=(PI_{it}-((TXFED+TXFO)/0.35)-\Delta TLCF_{it})/AT_{i,t-1} \tag{1}$$

This measure is calculated for all ExecuCom firms when data is available.

3.1.2 *SHELTER*

Tax shelters refer to specific transactions firms use in order to reduce taxes. The IRS Commissioner in 2006 stated that there is rise on the use of tax arbitrage strategies (Drucker

(2006)) and the estimated dollar amount of taxes saved through tax shelters could be as high as $10 billion annually (Bankman (1999)).

It is, however, difficult to identify whether a firm is active participating in a tax shelter. Using a sample of firms that are identified as corporate tax shelter participants, Wilson (2009) develops a model to predict the likelihood of sheltering activities with financial statement data. The model is below:

$$SHELTERScore_{it} = -4.86 + 5.20 \times BTD_{it} + 4.08 \times DAP_{it} - 1.41 \times LEV_{it} + 0.76 \times AT_{it} + 3.51$$
$$\times ROA + 1.72 \times FOREIGN\ INCOME + 2.43 \times R\&D \qquad (2)$$

Where *BTD* is defined above, *DAP* is the discretionary accruals from the performance-adjusted modified cross-sectional Jones model; *LEV* is long-term debt (DLTT) divided by total assets (AT); *AT* is the log of total assets (AT); *ROA* is pre-tax earnings (PI) divided by total assets; *FOREIGN INCOME* is an indicator variable set equal to one for firm observations reporting foreign income, and zero otherwise; and R&D is research and development expense (XRD), divided by total assets. Following Rego and Wilson (2011), *SHELTER* is then an indicator of 1 for firm-years in the top quintile of the tax shelter prediction scores.

3.1.3 *DTAX*

DTAX is the residual from the following regressions estimated by year and 2-digit SIC code based on the model from Frank et al (2009):

$$PERMDIFF_{it} = \alpha_0 + \alpha_1 INTANG_{it} + \alpha_2\ UNCON_{it} + \alpha_3 MI_{it} + \alpha_4 CSTE_{it} + \alpha_5 \Delta NOL_{it} +$$
$$\alpha_6 LAGPERM_{it} + \varepsilon_{it} \qquad (3)$$

Where *PERMDIFF* equals the difference between the total book-tax differences and the temporary book-tax differences ([{PI – [(TXFED + TXFO) / STR]} – (TXDI /STR)]). *TXFED* is

the current federal tax expense; *TXFO* is the current foreign tax expense; *TXDI* is the deferred

tax expense (income account); and *STR* is the statutory tax rate, which equals 0.35; *INTANG* is

the Goodwill and other intangibles (INTAN); UNCON is the income (loss) reported under the

equity method (ESUB); MI is the income (loss) attributable to minority interest (MII); CSTE is

the current state tax expense (TXS); ΔNOL is the change in net operating loss carry forwards

(TLCF); and LAGPERM is PERMDIFF at year t-1. All the variables including the intercept are

scaled by the assets at the beginning of the year.

We run this model by year and 2-digit SIC code using the entire Compustat database

when required information is available. The estimated coefficients are then used in the matched

ExecuCom firm-years to calculate the predicted value of *PERMDIFF*. Residuals therefore are

the differences between the actual value of *PERMDIFF* and the estimated value of *PERMDIFF*

for each firm-year observation. *DTAX* could be used to measure the intentional portion of tax

avoidance, which is similar to the Jones (1991) model of discretionary accruals.

3.1.4 *DD_TA*

All the tax avoidance measures described above include both domestic income and

foreign income in the estimation. Because our hypothesis on the effects of CEOs' political

affiliations on tax avoidance relies on the argument that the relationship between taxpayers and

the government shapes their tax policies, we add a measure that is not complicated by foreign

income and taxes. Following Desai and Dharmapala (2006), we estimate *DD_TA*, the residual

book-tax difference, which equals the residual from the following firm fixed effects regression:

$$BT_{it} = \beta_1 TA_{it} + \mu_i + \varepsilon_{it} \tag{4}$$

Where BT is the book-tax difference, which equals the domestic U.S. taxable income (estimated by federal tax expense and progressive tax rate) subtracted from the firm's domestic U.S. financial statement income; TA is total accruals measured using the cash flow method, which equals income before extraordinary items (IB) minus net cash flow from operating activities (OANCF), adjusted to extraordinary items and discontinued operations (XIDOC). Both variables are scaled by lagged total assets. Desai and Dharmapala (2006) suggest that this is a more precise measure of tax avoidance because it takes out the component that is attributable to earnings management. Because it is estimated as a residual, DD_TA is constrained to sum to zero overall all firms and all years.

3.1.5 Summary of the Measures of Tax Avoidance

In sum, by merging ExecuCom database with Compustat from 1992 to 2007 and by requiring data available for the calculation of various tax avoidance measures, we end with 20,151 firm-year observations (2,447 unique firms) for BTD (book-to-tax difference) and $SHELTER$ analyses, 13,549 (2,011 unique firms) for $DTAX$ analysis and 10,310 (1,741 unique firms) for DD_TA analysis.

As shown in Table 2, the average BTD is -0.008 and the median is 0.011. Although the average ratio is negative, thereby indicating that tax avoidance is not a typical phenomenon during the sample period, the average dollar amount book-to-tax difference is about $43 million.

It implies that the tax avoidance activities are more prevalent among large corporations, making the study of the determinants of tax avoidance economically significant.

[INSERT TABLE 2 HERE]

Figure 1 presents the trend *BTD* over the years. It shows that the average *BTD* decreases during the 90s and begin to increase significantly in 2001. Mills (1998) and Wilson (2009) document that firms with large book-to-tax differences are more likely to be audited by the IRS and to engage in sheltering activities. Caution is needed, however, in interpreting the increasing trend of *BTD*. Although the literature shows that *BTD* captures some element of tax avoidance, it may be driven by active earning management. For that exact reason, Hanlon et al (2010) suggest that this measure cannot be used reliably to compare tax avoidance across firms with varying levels of financial accounting earning quality. To mitigate the effects of this measurement error, we include a variable to control the level of discretionary earnings management in the later regression analyses of *BTD*.

[INSERT FIGURE 1 HERE]

As also shown in Figure 1, the tax avoidance measures present different trends during the sample period. For example, *DTAX*, the discretionary component of the permanent book-to-tax difference, increases significantly during the 90s but begins to decline in 2001. Given that *DTAX* is viewed as measuring activities on the aggressive end of the tax avoidance continuum (Hanlon et al. (2010)), this trend suggests that increasingly aggressive corporate tax avoidance behavior was discouraged significantly after the corporate scandal of Enron, probably due to more stringent auditing. *DTAX* increases again in 2005 and 2006 before it declines.

17

DD_TA, which measures firms' domestic total tax avoidance (both permanent and temporary), rises slightly near the end of the 90s and starts to rise significantly after 2001. It drops as *DTAX* increases in 2005 and 2006. The trends of *DTAX* and *DD_TA* suggest a substitutive relationship between them. It appears that firms first search for permanent tax avoidance and then turn to temporary tax planning (such as deferred tax expenses) when the external auditing strengthens.

Figure 2 shows that there is a significant increase in the estimated sheltering activities starting from 2002. Hanlon et al. (2010) highlight that the proxy of shelter captures tax avoidance at the transaction level at the aggressive end of the tax avoidance continuum. Therefore the increasing trend suggests that more firms become aggressive in searching for ways to reduce taxes. This trend, however, does not necessarily suggest that the overall tax avoidance increases as well. Hanlon et al. (2010) suggest that sheltering may be endogenous in measuring tax avoidance because it might be that those firms that cannot reduce taxes otherwise resort to the extreme method of sheltering.

[INSERT FIGURE 2 HERE]

The large increase in the use of shelters after 2001 may indicate that firms resort to extreme tax avoidance techniques when other tax avoidance strategies are discouraged or do not satisfy those firms' tax reduction needs. These tax avoidance measures suggest that firms—at least some of them—avoid taxes actively and search for alternatives when one type of tax strategy become riskier in the sense of being audited/detected.

Table 3 shows that these tax avoidance measures are positively and significantly correlated. The highest correlation is between *BTD* and *DD_TA*, which is 0.591, and the lowest is correlation is between *SHELTER* and *DTAX*, which is 0.094. The other correlations range from 0.159 to 0.275. These correlations suggest that although they all share some common components in measuring tax avoidance, they may capture different information regarding firms' tax policies.

[INSERT TABLE 3 HERE]

3.2 Measuring CEOs' Political Affiliations

Following Hong and Kostovetsky (2009) and others, we use a CEO's political donations during election cycles to determine his or her party affiliation. Individual donation data is obtained from the Federal Elections Committee (FEC) website (www.fec.gov). All federal contributions made by individuals are available on the FEC website starting in 1979. Since we only have detailed CEO information starting from 1992, we search for donations starting from the election cycle of 1991-1992. The FEC provides information such as donor's residence, employer, amount of donation, and to whom they donate. Donors can make direct donations to candidates or party committees, whose party affiliation can be identified though the FEC website. Due to the enormous size of the records of each election cycle, we match the FEC data with ExecuCom database through donors' occupations first to reduce the size of the file. Names are then used to identify those CEOs who make donations.

A CEO's party affiliation in a fiscal year is determined by the amount of the donations he or she makes during the recent election cycle. Following the mapping techniques described

above, we are able to identify 1,468 unique CEOs who made donations during the sample period. 929 are identified as Republicans and 478 are identified as Democrats. We find that CEOs may change their party affiliations. We report 195 of them are identified as both Republicans and Democrats during the sample period in different years. This change of party affiliation provides us an opportunity to examine whether the observed differences, if there are any, are caused by CEOs' political beliefs or by other unobservable CEO characteristics. There are also CEOs who donate to non-party affiliated committees. In this case, we classify them as Independent CEOs, which is the same classification applied to those CEOs who do not make donations.

Table 4 presents the summary of CEOs' party affiliations by year. Most CEOs that make donations during an election cycle (about 24% of the total sample) donate to a single party (about 13% to Republican committees and 5% to Democratic committees) or to a nonparty committee (such as a commercial committee). Our matching results of CEOs' party affiliations are comparable to those reported by Hutton et al. (2011).

[INSERTA TABLE 4 HERE]

4. Summary Statistics

4.1 Sample Characteristics by Tax Avoidance

Table 5 presents the sample characteristics by tax avoidance. Specifically, *E Index* is an entrenchment index developed by Bebchuk, Cohen, and Ferrell (2009). The index ranges from 0 to 6, with higher numbers indicating more management entrenchment and therefore *worse* corporate governance. *TACC/TA$_{n-1}$* is the total accrual using cash flow approach, which is calculated as income before extraordinary items minus cash flow from operating activities adjusted for extraordinary items and discontinued operations. *DAP* is the estimated discretionary

accruals. Specifically, we apply the modified Jones model (Dechow et al. (1995)) to estimate

discretionary accruals. First we estimate the following cross-sectional regressions for each two-

digit SIC code and year for the entire Compustat sample:

$$TACC_{jt}/TA_{jt-1} = \alpha 1/TA_{jt-1} + \beta_1(\Delta Sale_{jt} - \Delta REC_{jt})/TA_{jt-1} + \beta_2 PPE_{jt}/TA_{jt-1} \tag{5}$$

Where $\Delta SALE_{jt}$ is the change in sales for firm j in year t; ΔREC_{jt} is the change in accounts

receivable; and PPE_{jt} is property, plant, and equipment for firm j at the end of year t. The

estimated coefficients from this equation are then used to compute discretionary accruals DAP:

$$DAP_{jt} = TACC_{jt}/TA_{jt-1} - \hat{\alpha}1/TA_{jt-1} - \hat{\beta}_1(\Delta Sale_{jt} - \Delta REC_{jt})/TA_{jt-1} - \hat{\beta}_2 PPE_{jt}/TA_{jt-1} \tag{6}$$

We also collect CEOs' annual compensation, including bonus, restricted stock grants, and

option grants, scaled by total annual compensation, respectively. Vega measures the sensitivity

of the manager's wealth to the firm's stock return volatility and captures risk-increasing

incentives. Delta, measures the sensitivity of the manager's wealth to the firm's stock price,

measures the dollar gain or loss in the manager's wealth for a given change in the firm's stock

price. The delta and vega calculations follow Guay (1999) and Core and Guay (2002), which use

the Black-Scholes (1973) option valuation model as modified by Merton (1973) to account for

dividends. Note that delta is the total dollar sensitivity of CEOs' wealth in both stocks and

options to a 1% change in stock price. Because Guay (1999) shows that option vega is many

times larger than stock vega, in our analysis vega is the total sensitivity of CEO's wealth in

options to a 0.01 change in the annualized standard deviation of stock returns. This measure is

consistent with the literature (see, e.g., Knopf et al. (2002); Rajgopal and Shevlin (2002); and

Coles et al. (2006)).

[INSERT TABLE 5 HERE]

The results of Table 5 show that firms that engage in more tax avoidance activities are significantly larger and less leveraged (except for the measure *DD_TA*). The size of those that are more likely to engage in sheltering activities is particularly large. The average size of these firms is about $15 billion. Since shelter transactions usually involve either foreign governments or entities and since the design of such transactions requires expensive professional advising, such sheltering is probably more affordable and economically meaningful for the largest corporations. Wilson (2009) suggests that the reason that those firms that are engaged in sheltering activities have lower leverage is because they use tax shelter deductions as a substitute for the interest deduction associated with debt.

There is no significant difference in corporate governance between firms with more tax avoidance and those with less when tax avoidance is measured by *DTAX and DD_TA*. The corporate governance of firms that are more likely to engage in sheltering transactions, however, is significantly stronger than those with lower likelihood of sheltering. Firms active in tax avoidance are also more aggressive in financial reporting, which is evident by the significantly higher accruals (total and discretionary). This result is consistent with Frank et al. (2009), in that those firms that are aggressive in avoiding taxes are also aggressive in financial reporting. The sign of the difference is opposite between high *DD_TA* firms and low *DD_TA* firms because this tax avoidance measure has already adjusted the earnings management component. The results of Table 5 also show that *TXDI*, which causes temporary book-to-tax difference, is significantly higher among tax aggressive firms, thereby suggesting that firms that are interested in avoiding taxes reduce both permanent and temporary tax expenses. The sign of the difference is opposite between high DTAX firms and low DTAX firms because the temporary tax expense has been deducted from this tax avoidance measure.

Lastly, Table 5 presents CEOs' economic incentives between high avoidance firms and low avoidance firms. Both CEOs' annual compensation and equity based wealth show significant differences between the two subsamples. The sign and the significance, however, vary depending on the types of tax avoidance. For example, higher bonuses are associated with higher *BTD, Shelter*, and *DD_TA*, but not *DTAX*. Higher value of stocks granted is associated with higher *BTD* and *Shelter* and higher options is associated with higher *Shelter* and *DTAX*. *Delta* and *Vega* are consistently associated with higher *BTD, Shelter*, and *DTAX*. The univariate results suggest that CEOs' economic incentives play a significant role in determining firms' tax avoidance. Therefore, any study of the individual effects of CEOs needs to control their economic incentives so the results will not be biased.

4.2 Tax Avoidance and Sample Characteristics by CEOs' Political Preferences

Table 6 presents the summary statistics of the measures of tax avoidance and sample characteristics by CEOs' political affiliations. The univariate results demonstrate that in keeping consistent with their political beliefs regarding tax policies, Republican CEOs avoid more taxes by all four measures of tax avoidance. Specifically, the average *BTD* of the firms with Republican CEOs is 0.007 (about $90 million), which is significantly higher than the -0.011 (about $32 million) of those with Independent CEOs. 25% of Republican led firms are defined as those that are most likely to engage in sheltering activities, as compared to 18.6% of those firms led by Independent CEOs.

[INSERT TABLE 6 HERE]

More importantly, for the two discretionary measures of tax avoidance *DTAX* and *DD_TA*, the same pattern remains: Republican CEOs avoid more total taxes (0.003) and permanent taxes (0.011) than their Independent counterparts (0.000 and 0.009 respectively). Given that the average size of the firms led by Republican CEOs is $8.519 billion—almost doubles the size of the firms led by Independent CEOs—the univariate findings of the differences in tax avoidance have economic significance.

Not consistent with the political preference hypothesis, however, is the result that firms led by Democrats have significantly higher book-to-tax difference and are more likely to use shelters than those led by Independent CEOs. We need to interpret these results with caution, as they may not necessarily suggest that Democrat CEOs avoid overall tax more significantly. For example, the higher book-to-tax difference (0.004 versus -0.011) may be driven by aggressive earnings management. Furthermore, although the greater use of shelter (0.278 versus 0.186) indicates their aggressiveness on tax avoidance, this measure suggests more tax avoidance at the transaction level, but not necessarily at the firm level of overall tax avoidance. The evidence so far seems to support the aggressiveness hypothesis of Democratic CEOs. The aggressiveness of Democrat CEOs in making general corporate decisions is explored by Hutton et al (2011). Their tax aggressiveness, however, could also be driven by higher risk incentives. Therefore, whether the results in *BTD* and *SHELTER* suggest the aggressiveness of Democratic CEOs needs to be studied further by controlling their risk incentives.

The results of Panel B of Table 6 indicate that firms with Republican CEOs have significantly higher leverage (0.205) than firms led by Independent CEOs (0.186). This difference supports the political hypothesis of the Republican CEOs in that the CEOs' political

24

beliefs make them search for even more tax deductions, even though their firms have already had

higher deductions from the interest expense.

Panel C of Table 6 provides further evidence that CEOs' economic incentives could play

a determining role in tax avoidance. Both Republican and Democratic CEOs receive

significantly higher bonus compensation, *Delta* and *Vega*. Since we show earlier that CEOs with

higher bonus, *Delta* and *Vega* are associated with various measures of higher tax avoidance, to

differentiate the competing hypotheses of the CEO's individual effects on tax avoidance, we split

the sample by CEO incentives in the following section.

4.3 Tax Avoidance and CEOs' Political Preferences: *Delta* vs. *Vega*

We have shown that a key factor that needs to be controlled for is the CEOs' economic

incentives in studying their individual effects on firms' tax decisions. To distinguish the

competing hypotheses and offer more insights, we split our sample *Vega, Delta* and options

granted in this section. For both hypotheses to be held, we should find that the CEOs' individual

effects are not driven by economic incentives and are even true when the economic incentives of

doing so are low.

Panel A of Table 7 shows the results of the tax avoidance by CEO political preference,

split by the median value of *Vega*. Mostly *Vega* comes from CEOs' ownership of the companies'

stock options. The literature has shown that executives with more *Vega* are associated with

riskier firm policies (e.g., Coles et al. (2006)). The t-tests of the differences shown in the last

column confirm our previous finding: firms with CEOs of higher *Vega* have significantly more

tax avoidance by all 4 measures. More importantly, firms led by Republican CEOs have

significantly higher tax avoidance than those by independent CEOs, even when the CEOs' economic incentives for doing so are low. Specifically, firms led by Republican CEOs have an average *BTD* of 0.001, *Shelter* of 0.119, *DTAX* of 0.010, and *DD_TA* of 0.002, which are significantly higher than those of the firms led by Independent CEOs, which are -0.023, 0.099, 0.006, and -0.001, respectively.

[Insert Table 7 Here]

Similar pattern exists when CEOs' *Delta* is low. As shown in Panel B, all four measures of tax avoidance are significantly higher for firms led by Republican CEOs even when their wealth exposure to companies' stock prices is low. The results for Republican CEOs confirm hypothesis 1.1 and reject hypothesis 2.1, in that Republican CEOs are associated with higher tax avoidance and this positive effect is not driven by CEOs' economic incentives because such a pattern is particularly significant when CEOs' *Vega* and *Delta* are low.

Table 7 shows that Democratic CEOs are associated with some measures of higher tax avoidance, too. This positive effect rejects the political preference hypothesis (1.2) in explaining Democratic CEOs' tax decisions. We find some evidence to support the aggressiveness hypothesis of Democratic CEOs (hypothesis 2.2). Specifically, firms led by Democratic CEOs are associated with higher *BTD* (-0.004 vs. -0.023) and *Shelter* (0.163 vs. 0.099) when *Vega* is low and higher *BTD* (-0.002 vs. -0.023) when *Delta* is low. The positive effect of Democratic CEOs seems to be even more significant when CEOs' incentives are high. For example, both *BTD* (0.009 vs. 0.000) and *Shelter* (0.351 vs. 0.278) are significantly higher when *Vega* is high, and *BTD* (0.009 vs. 0.002), *Shelter* (0.362 vs. 0.295), and *DD_TA* (0.005 vs. 0.001) are higher when *Delta* is high.

26

To offer more insights for the individual effects of CEOs, Table 8 shows results for the subsamples divided by corporate governance and CEOs' option compensations. The results of Panel A show some evidence that firms with better governance experience more tax avoidance. For example, *Shelter* is 0.229 and *DTAX* is 0.011 for better-governed firms, compared to 0.198 and 0.009 of poorly-governed firms. The differences are statistically significant. Because both Shelter and DTAX capture the relatively more aggressive tax planning, these results suggest that shareholders value the saving from those policies. When breaking down the sample further by the options paid, we find that—in keeping consistent with the political preference hypothesis of Republican CEOs (hypothesis 1.1)—firms led by Republican CEOs have significantly higher tax avoidance when option payments are low, regardless of the quality of the corporate governance.

[Insert Table 8 Here]

The results of Tables 7 and 8 suggest that the political preference hypothesis seems to explain the Republican CEOs' effects on tax avoidance, thereby supporting Hypothesis 1.1. The results also indicate that there is some evidence to support the aggressiveness of Democratic CEOs on tax policies, as suggested by Hypothesis 2.2. Table 9 summarizes the evidence supporting or rejecting the proposed hypotheses.

[Insert Table 9 Here]

5. Results for Regressions

To examine whether the univariate results hold after we include control variables, we first run OLS to analyze the cross-sectional differences, and we then run firm fixed-effect models to study whether the difference caused by CEOs' political affiliations is driven by any unobservable firm

and/or CEO characteristics. We refine our studies by examining the role of the State and corporate governance.

5.1 CEOs' Political Affiliation and Tax Avoidance: OLS Regressions

Our basic empirical specification seeks to determine if CEOs' political affiliations explain the cross-sectional differences in tax avoidance. We use each of four measures of tax avoidance as dependent variable. CEOs' political affiliation indicators (*REP* and *DEM*) are examined in the total sample and in the subsamples of CEOs' economic incentives. We present the results by splitting the sample with CEOs' *Delta*.[5] A set of controls are included in some models. The basic specification is:

$$TA_{it} = \beta_0 + \beta_1 REP + \beta_2 DEM + \text{Year Dummies} + \text{Industry Dummies} (+ \text{Controls}) + \varepsilon_{it} \quad (7)$$

Where TA represents one of the four tax avoidance measures: *BTD*, *SHELTER*, *DTAX* and *DD_TA*, respectively. OLS regressions are conducted except for SHELTER, for which logit models are conducted. The controls are CEO incentives (*Bonus/TDC_{it}*, *Stock/TDC_{it}*, *Options/TDC_{it} Delta_{it}* and *Vega_{it}*), *MTB_{it}*, *Hitech_{it}*, *REPPresident_t*, *LogAT_{it}*, *DAP_{it}*, *TXDI_{it}*, *FOREIGN_{it}*, and *LEV_{it}*.

Table 10 presents the results of the regression models. The results of the OLS regressions show that CEOs' political affiliations explain the cross-sectional differences in tax avoidance significantly. Specifically, after including the control variables, the coefficient of Republican CEO is positive and significant in all 4 measures of tax avoidance as shown in Models 1, 2, 5, 6, 9,10, 13, and 14. More importantly, the positive coefficients of Republican CEOs remains significant for the tax measures of *Shelter, DTAX*, and *DD_TA*, confirming the political

---

[5] Dividing results by other incentive measures yields similar results. To preserve space, we do not present the entirety of these results in the text.

preference hypothesis by showing that the positive effects remain even when economic incentives are low.

[INSERT TABLE 10 HERE]

The coefficients for Democratic CEOs are positive, too, especially when the economic incentives are high for the tax measures of Shelter and DD_TA as shown in Models 8 and 16, suggesting that the positive effects of Democratic CEOs are most likely driven by economic incentives.

Table 10 also confirms the important roles of CEO incentives on tax avoidance. Specifically, bonus increases with tax avoidance significantly, especially when other incentives are low. Models 11 and 15 show that when CEOs' *Delta* is low, higher bonus is associated with higher *DTAX* and *DD_TA*. Such s positive effect, however, disappears when *Delta* is high. A similar supplementary effect exists for the stock and option compensation. Both seem to increase tax avoidance (stocks to *DTAX* and *DD_TA* and options to *Shelter* and *DD_TA*) when *Delta* is relatively low. Lastly, both *Delta* and *Vega* increase with *BTD*, *Shelter*, and *DD_TA*, but not *DTAX* and the positive effect of *Vega* is especially significant when Delta is low. The significant positive effects of CEO incentives are consistent with the results of Rego and Wilson (2011). They find that equity risk incentives are positively associated with higher tax avoidance.

Table 10 also reports some interesting results of the control variables. *DAP*, a measure of discretionary earning management, is positive and significant with *BTD* and *DTAX*. This is consistent with the finding of Frank et al. (2009) that there is a strong positive association

between tax aggressiveness and aggressive financial reporting behaviors. *TXDI* is positively and significantly associated with *DD_TA*. Because *DD_TA* does include both temporary and permanent tax avoidance, it is important to control *TXDI* when studying the factors that determine this measure of tax avoidance.

The fraction of foreign income is negatively and significantly associated with DD_TA. This is because *DD_TA* by design measures firms' domestic tax planning only. The negative relationship between foreign income and tax avoidance suggests that the source of foreign income provides opportunities of tax sheltering and therefore reduce the level of domestic tax avoidance. It is the firms that have little foreign income that have to rely more on domestic tax planning. A firm's level of leverage is negative and significant for *BTD* and *DD_TA*, confirming that those firms with lower leverage use tax shelter deductions as a substitute for the interest deduction associated with debt.

5.2 CEOs' Political Affiliations and Tax Avoidance: Fixed-Effects Regressions

To examine whether the significant differences cross firms with CEOs of different political affiliations are driven by some unobservable firm or CEO characteristics, we run firm-fixed regressions for all the firms that do not change CEOs during the sample period. Therefore, the sign and significance of the coefficients of Republican dummy or Democratic dummy would suggest that controlling unobserved heterogeneity across firms and CEOs, whether the change of CEOs political affiliations causes significant changes in the firm's tax avoidance. The results are reported in Table 11. Note that in order to capture more changes in the likelihood of engaging

shelters, we replace the dummy variable of *SHELTER* with the probability of sheltering, calculated from the prediction score obtained from equation 2.

[INSERT TABLE 11 HERE]

The results in Table 11 show that when CEOs become Republican (from Democratic or Independent), their firms experience significantly more total tax avoidance (*DD_TA*) and permanent tax avoidance *(DTAX)*. A similar pattern, however, does not exist when CEOs become Democratic. These results confirm that CEOs' political beliefs determine the firms' tax avoidance, especially the discretionary portion. And this pattern is particularly true for Republican CEOs. For Democratic CEOs, the reported significant impacts in the OLS models are more likely to be driven by some unobservable firm and/or CEO heterogeneity rather than their political belief.

5.3 CEOs' Political Affiliations and Tax Avoidance: by Corporate Governance

Because of the separation of ownership and control, the effects of CEO on tax avoidance should be examined within an agency framework (Slemrod (2004), Chen and Chu (2005), and Crocker and Slemrod (2005)). To understand the dynamics between corporate governance and CEOs' political affiliations, we test our hypotheses in both well-governed firms and poorly-governed firms. If tax avoidance adds value to shareholders, managers in well-governed firms ought to engage in more aggressive tax planning so as to increase the after-tax wealth of the firm's owners. The political preference hypothesis and the aggressiveness hypothesis suggest that CEOs may magnify such incentives in well-governed firms.

Table 12 reports the results of the OLS regressions by splitting the sample into firms with better governance (E index < median) and lower governance (E index ≥ median) and Table 13 reports the results of the fixed-effect regressions for the sub samples.

[INSERT TABLE 12 and 13 HERE]

The results of the OLS regressions are mixed. The significance of Republican CEOs remains in both better-governed and lower-governed subsamples for *BTD* but do not vary for *Shelter* and *DD_TA*. For *DTAX,* Republican CEOs are related with significantly higher *DTAX* when firms are well-governed.

More importantly, the results of the firm and CEO fixed-effect regressions are consistent with our hypothesis and previous evidence. Table 13 presents that when CEOs change political preference and become Republican, their firms experience significantly higher discretionary tax avoidance (*DTAX* and *DD_TA*) and these results only exist among well-governed firms. If tax avoidance adds value to shareholders, managers in well-governed firms ought to engage in more aggressive tax planning so as to increase the after-tax wealth of the firm's owners. Our results suggest that the political preference of Republican CEOs magnify such incentives in well-governed firms.

5.4 Robustness Tests

5.4.1 CEOs' Presidential Approval Ratings and Tax Avoidance

Besides their political beliefs, which may have several fundamental aspects that are likely to be held relatively stable over time such as opinions on the role of government and the

redistribution of wealth, CEOs' opinions about the incumbent President may also impact their decisions on corporate tax policies. As a robustness check, we collect the presidential approval rating by party affiliation from Gallup and assign them to CEOs by year and their political preference. Those non-party affiliated CEOs (Independent CEOs) are given the overall rate. By examining CEOs' presidential approval ratings, we include the State (or taxpayers' perception of the State), the uninvited investor, explicitly in determining tax avoidance. Figure 3 presents the trend of CEOs' Presidential approval ratings by party affiliation.

[INSERT FIGURE 3]

The trends show that each president receives significantly higher approval ratings from their own party followers and significantly lower approval ratings from their counterparty's party followers. Ratings by independent voters are in the middle. During the tenure of each president, there are either increasing or decreasing trends of approval ratings, regardless of the voters' party affiliation. Specifically, President Clinton received increasing approval ratings—especially during his second term—from all voters, and President Bush's approval ratings, on the other hand, decreased during his tenure.

Table 14 presents the results of fixed effect regressions by President. The results of the firm fixed effect regressions show that during President Bush's terms, firms' tax avoidance (except for *DTAX*) increased with the voters' president approval ratings. Since President Bush urged significant tax cuts during his tenure, our results confirm our hypothesis that CEOs' political opinions are a significant determinant of firms' tax avoidance.

[INSERT TABLE 14 HERE]

5.4.2 The 2003 Dividend Tax Cut

One of President Bush's significant tax policies was the 2003 dividend tax cut. This tax reform introduced a favorable tax rate for individual dividends, whereby dividends were taxed at 15% instead of 35%.[6] Although this tax cut stimulated research interest on the effects of taxes on corporate behaviors (e.g., Chetty and Saez (2006)), there was not much evidence on how it impacted corporate tax policies. We contend that with the dividend cut there was more incentive to increase the bottom line, thus making more money available to the shareholders by avoiding taxes. Therefore, we should observe an overall increase in corporate tax avoidance. We further suspect that such an increase may be even more significant when CEOs have significant equity ownership. What is more relevant to this study is that the positive effects of Republican CEOs on tax avoidance should exist even before this dividend tax cut.

We first present a summary on how this tax reform impacts firms' dividend policies. The benefit of the 2003 dividend cut could only be realized when the firms paid dividends. Panel A of Table 15 shows that there is a significant increase in the number of firms paying dividends after the 2003 tax cut, especially among the firms led by CEOs with higher *Delta*.

[Insert Table 15 Here]

The results of Panel C suggest that (consistent with our conjecture) firms experience significantly higher tax avoidance after 2003, measured by *BTD*, *Shelter*, and *DD_TA*, but not *DTAX*. Those increases are higher and significant among firms led by CEOs with higher *Delta*. Specifically, *BTD* increases to 0.015, *Shelter* to 0.350, and *DD_TA* to 0.004 after the tax cut, compared to -0.002, 0.277 and -0.0002 before the tax reform, respectively.

---

[6] This is the highest tax rate under a progressive individual income tax schedule.

We are interested in whether our findings of the individual effects of Republican and Democratic CEOs are driven by the increase of this tax cut. Table 16 present the differences in tax avoidance among various groups before and after the tax cut. We find that the positive effects of Republican CEOs exist even before the dividend tax cut, when the overall incentive of tax avoidance was relatively lower. The results of this robustness check confirm the political preference hypothesis of Republican CEOs.

[Insert Table 16 Here]

6. Conclusion

Despite the crucial importance of taxes in citizens' lives and economic development, many issues remain confusing or unexplored. We attempt to shed light on this literature by examining the effects of CEOs' political affiliations on corporate tax policies. Dryeng, Hanlon and Maydew (2010) find that individual executives play a significant role in determining tax avoidance that cannot be explained by firm characteristics, but that study could not identify what explains the variation among managers' individual effects. We believe that individuals' political beliefs influence their willingness to pay taxes and that the United States provides a particularly good backdrop for this study because there are significant discrepancies among individuals' beliefs on the size and efficiency of government and on the fairness and effectiveness of wealth distribution.

Although there is no universally accepted measure of tax avoidance in the relatively young body of literature, we select four of those from existing studies that are suitable for our research question. They are the two tax avoidance proxies that are considered to measure the discretional portion of tax planning: *DTAX* and DD_TA; *SHELTER*, which identify the firms that

are most likely to engage in sheltering activities; and *BTD*, which is relatively straightforward and free from model specifications. In sum, the tax avoidance measures we choose from the literature are representative and range from the less aggressive end to the more aggressive end of the tax avoidance continuum.

The results support the political preference hypothesis in explaining Republican CEOs' positive effects on their firms' tax avoidance. The fact that such results are even stronger when the economic incentives are low suggests that the observed positive relationship is not driven by CEO compensation, which we find has a significant impact on a firm's tax policies. We also report that the positive individual effect of Republican CEOs is particularly significant among well-governed firms.

To our knowledge, our paper is among the first that provides empirical evidence on how individuals' political beliefs influence their decisions on tax avoidance behaviors. Since our study is conducted in the context of corporations, our results shed light on the relativly young body of literature regarding the determinants of corporate tax avoidance.

References

Allingham, M.G. and Sandmo A. (1972) Income tax evasion: A theoretical analysis. Journal of Public Economics 1: 323 – 338.

Alm, J., McClelland, G.H. and Schulze, W.D. (1992) Why do people pay taxes? Journal of Public Economics 48: 21 – 38.

Armstrong, C., Blouin, J., Larcker, D., 2011. The incentives for tax planning. Journal of Accounting and Economics, forthcoming.

Bankman, J. 1999. The new market in corporate tax shelters Tax Notes 83: 1775.

Bebchuk, L., A. Cohen, and A. Ferrell. 2009. What Matters in Corporate Governance? Review of Financial Studies 22(2):783–827.

Bordignon, M., 1993. A fairness approach to income tax evasion. Journal of Public Economics 52 (3), 345– 362.

Bonaparte, Yosef, Alok Kumar, and Jeremy Page, 2010, Political climate, optimism, and investment decisions, Working paper, University of Texas as Austin; Available at http://ssrn.com/abstract=1509168.

Dechow, P.M., Sloan, R.G., Sweeney, A.P., 1995. Detecting earnings management. The Accounting Review 70, 193–225.

Chen, K-P, Chu C., 2005. Internal control vs. external manipulation: A model of corporate income tax evasion. RAND Journal of Economics 36, 151–164.

Chin, Amanda Y.M., and Jerry T. Parwada, 2009, Red-blooded republican or true-blue democrat? The influence of political preferences on money managers' portfolio decision, Working Paper, University of New South Wales; Available at http://ssrn.com/abstract=1339725.

Crocker, K., Slemrod, J., 2005. Corporate tax evasion with agency costs. Journal of Public Economics 89, 1593-1610.

Drucker, J. 2006. Minding the gap: IRS looks closer to profit disparity. The Wall Street Journal (November 27, 2006): C1.

Desai, M., Dharmapala D., 2006. Corporate tax avoidance and high-powered incentives. Journal of Financial Economics 79, 145-179.

Dyreng, S., Hanlon, M., Maydew, E., 2010. The effects of executives on corporate tax avoidance. The Accounting Review, Forthcoming.

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

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

Hong, Harrison, and Leonard Kostovetsky, 2010, Red and blue investing: Values and finance, Journal of Financial Economics, Forthcoming.

Hutton, Irena, Jiang, Danling and Kumar, Alok, Corporate Policies of Republican Managers (December 22, 2011). AFA 2011 Denver Meetings Paper. Available at SSRN: http://ssrn.com/abstract=1573167.

Jones, J. 1991. Earnings management during import relief investigations. Journal of Accounting Research 193: 210-212.

Mills, L., 1998. Book-tax differences and Internal Revenue Service adjustments. Journal of Accounting Research 36:2, 343-356.

Rego, Sonja O. and Wilson, Ryan J., Equity Risk Incentives and Corporate Tax Aggressiveness (December 2012). Journal of Accounting Research, Forthcoming.

Roth J.A., Scholz, J.T. and Witte, A.D. (1989) (eds.) Taxpayer Compliance: An Agenda for Research. University of Pennsylvania Press, Philadelphia

Schwartz, R.D. and Orleans, S. (1967) On Legal Sanctions. University of Chicago Law Review 34: 282 – 300.

Slemrod, J., Yitzhaki, S. 2002. Tax avoidance, evasion, and administration. In: Auerbach, A., Feldstein, M., (Eds.). Handbook of Public Economics, Vol. 3. Amsterdam: Elsevier Science. 1423–1470.

Slemrod, J., 2004. The economics of corporate tax selfishness. National Tax Journal 57, 877–99.

Smith, K.W. (1992). "Reciprocity and fairness: Positive incentives." In J. Slemrod (ed.) Why people pay taxes. Tax compliance and tax enforcement. Ann Arbor: The University of Michigan Press, pp. 223-250.

Spicer, M.W. and Lundstedt, S.B. (1976) Understanding Tax Evasion. Public Finance 31: 295 – 305.

Torgler, B., 2007. Tax Compliance and Tax Morale: A Theoretical and Empirical Analysis. Edward Elgar Publication

Weisbach, D. 2002. Ten truths about tax shelters, 55 Tax L. Rev. 215.

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

Figure 1
Tax Avoidance from 1992 to 2007

This figure shows the trends of three measures of tax avoidance: *BTD*, *DTAX* and *DD_TA*. The calculation of these measures is explained in the text Section 3 (page 13) and in Table 2.
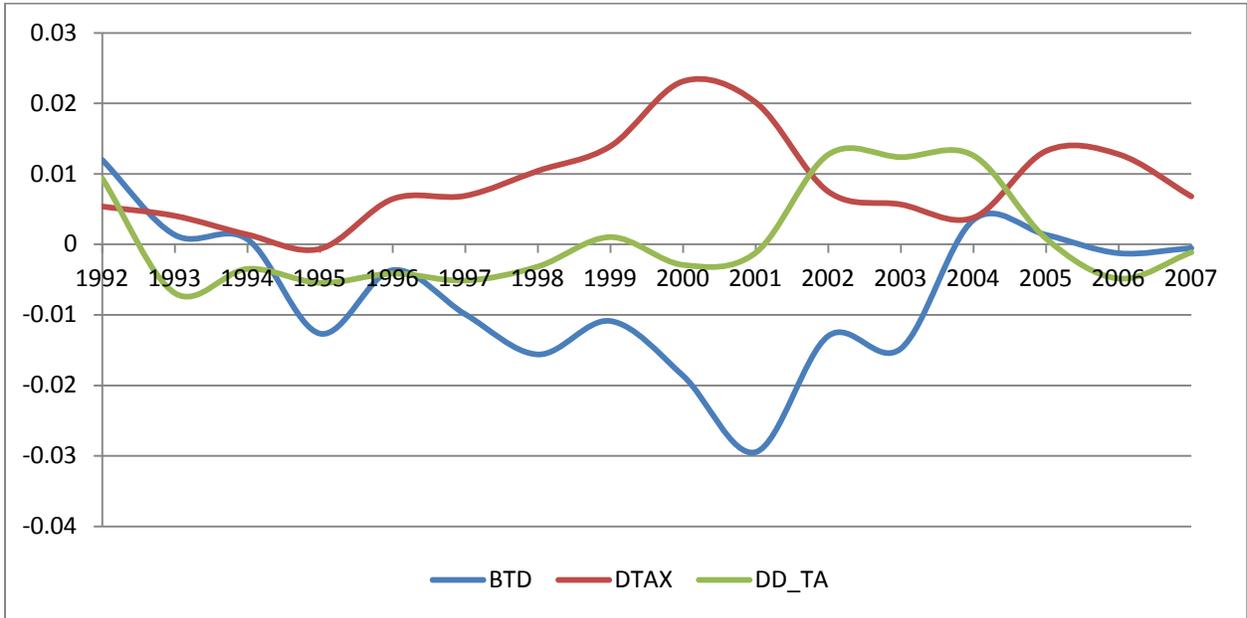
Figure 2
Tax Shelter

This figure presents the trend of the average likelihood of sheltering activities. The likelihood of sheltering is estimated by using the model defined by Wilson (2009) and details can be found in the text Section 3 (page 13) and Table 2.
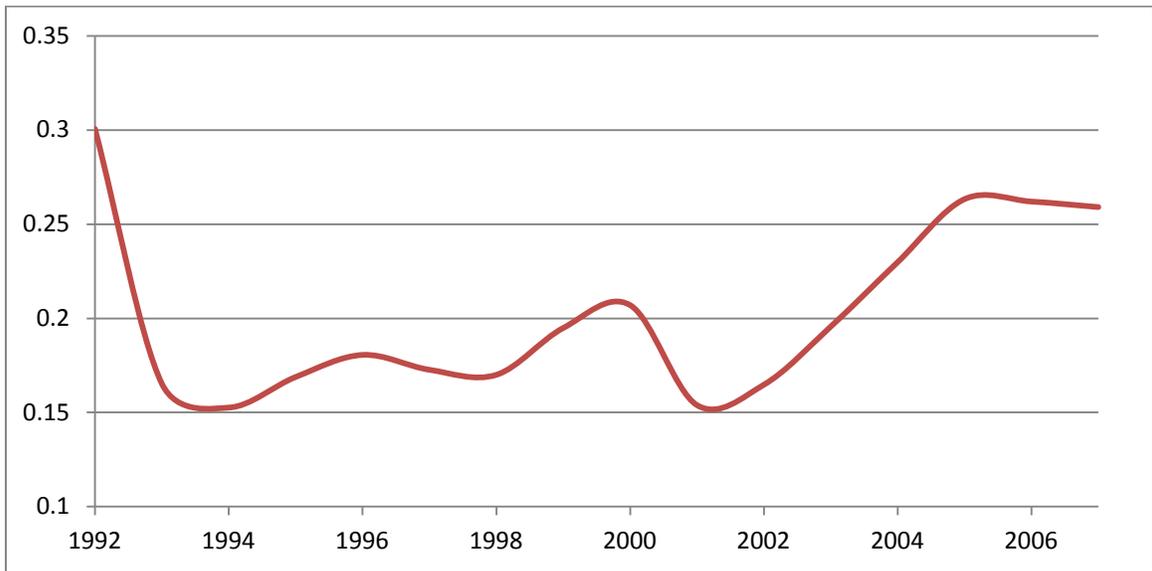
Figure 3

Presidential Approval Ratings by Party Affiliation

This figure presents the average Presidential approval rates of Republicans, Democrats and all who took the poll. The rates are collected from Gallup. http://www.gallup.com/poll/116500/Presidential-Approval-Ratings-George-Bush.aspx for President Bush and http://www.gallup.com/poll/116584/Presidential-Approval-Ratings-Bill-Clinton.aspx for President Clinton.
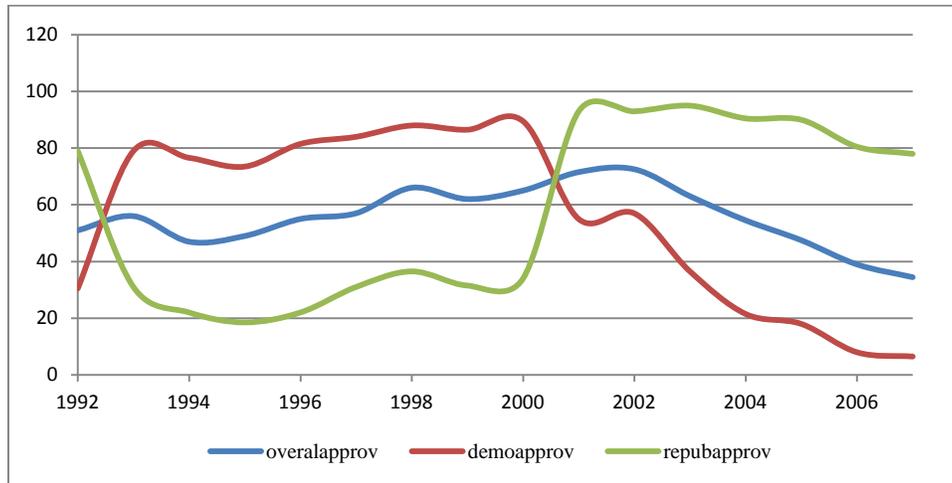
Table 1

Hypotheses: Political Affiliation vs. Aggressiveness

Panel A. The political hypothesis in explaining the CEO effects on tax avoidance.

	Political Hypothesis						
	Republican				Democratic		
	All	Low Risk Incentives	High Risk Incentives		All	Low Risk Incentives	High Risk Incentives
TAX Avoidance	+	+	"+" or "No"		-	-	"-" or "No"

Panel B. The conservatism (aggressiveness) hypothesis in explaining the CEO effects on tax avoidance.

	Conservatism vs. Aggressiveness						
	Republican (conservatism)				Democratic (Aggressiveness)		
	All	Low Risk Incentives	High Risk Incentives		All	Low Risk Incentives	High Risk Incentives
TAX Avoidance	-	-	"-" or "No"		+	+	"+" or "No"

Table 2

Summary Statistics of Tax Avoidance

	Observations	Firms	Mean	Median	SE (Mean)
BTD[1]	20,515	2,447	-0.008	0.011	0.154
$BTD(mil.)	20,515	2,447	43.426	7.361	826.070
SHELTER[2]	20,515[5]	2,447	0.200	0.000	0.400
DTAX[3]	13,549[5]	2,011	0.009	0.004	0.059
DD_TA[4]	10,310[5]	1,741	0.000	0.000	0.050

[1]BTD: The total book-tax difference, which equals book income less taxable income scaled by lagged assets. Book income is pretax income (PI) in year t. Taxable income is calculated by summing the current federal tax expense (TXFED) and current foreign tax expense (TXFO) and dividing by the statutory tax rate (0.35) and then subtracting the change in NOL carryforwards (TLCF) in year t.

[2]SHELTER: An indicator variable set equal to 1 for firms in the top quintile of the predicted probability the firm is engaged in tax sheltering based on model from Wilson (2009):
$$SHELTER = -4.86 + 5.20 \times BTD + 4.08 \times DAP - 1.41 \times LEV + 0.76 \times AT + 3.51 \times ROA + 1.72 \times FOREIGN\ INCOME + 2.43 \times R\&D,$$
Where: DAP is the discretionary accruals from the performance-adjusted modified cross-sectional Jones model; LEV is long-term debt (DLTT) divided by total assets (AT); AT is the log of total assets (AT); ROA is pre-tax earnings (PI) divided by total assets; FOREIGN INCOME is an indicator variable set equal to one for firm observations reporting foreign income, and zero otherwise; and R&D is R&D expense (XRD), divided by total assets.

[3]DTAX: Residual from the following regression estimated by year and 2-digit SIC code based on the model from Frank et al (2009):
$$PERMDIFF_{it} = \alpha_0 + \alpha_1 INTANG_{it} + \alpha_2\ UNCON_{it} + \alpha_3 MI_{it} + \alpha_4 CSTE_{it} + \alpha_5 \Delta NOL_{it} + \alpha_6 LAGPERM_{it} + \varepsilon_{it}$$
Where: PERMDIFF = Total book-tax differences– temporary book-tax differences = [{PI – [(TXFED + TXFO) / STR]} – (TXDI /STR)], where TXFED is the current federal tax expense, TXFO is the current foreign tax expense, TXDI is the deferred tax expense (income account), and STR = Statutory tax rate (0.35); INTANG= Goodwill and other intangibles (INTAN); UNCON= Income (loss) reported under the equity method (ESUB); MI = Income (loss) attributable to minority interest(MII); CSTE = Current state tax expense(TXS); ΔNOL = Change in net operating loss carry forwards (TLCF); LAGPERM=PERMDIFF at year t-1. All the variables including the intercept are scaled by the assets at the beginning of the year.

[4] DD_TA: The Desai–Dharmapala (2006) residual book-tax difference, which equals the residual from the following firm fixed effects regression:
$$BT_{i,t} = \beta_1 TA_{i,t} + \mu_i + \varepsilon_{i,t},$$
Where: BT is the book-tax difference, which equals the (domestic US) taxable income (estimated by federal tax expense and progressive tax rate) subtracted from the firm's domestic US) financial statement income; TA is total accruals measured using the cash flow method, which equals income before extraordinary items (IB) minus net cash flow from operating activities(OANCF), adjusted to extraordinary items and discontinued operations (XIDOC). Both variables are scaled by lagged total assets.

[5]The number of observations varies depending on the availability of required information. For example, in calculating DTAX, changes in net operating loss carry forwards are needed. For those that we could not find records for year t-1 are excluded from the estimation. This is the major cause of the difference between the number of observations for DTAX and SHELTER. For $TA_{RESIDUAL}$, because domestic income is needed in estimating domestic taxable income, those firms that do not report domestic income explicitly are excluded from the estimation.

Table 3
Correlations[1] of Tax Avoidance Variables

	BTD	SHELTER	DTAX	DD_TA
BTD	1			
SHELTER	0.220***	1		
DTAX	0.275***	0.094***	1	
DD_TA	0.591***	0.159***	0.196***	1

[1]Correlations are estimated when data is available.

Table 4

CEOs' Political Preference

This table presents the distribution of CEO's political preference. The number of firms included in the study increases significantly starting from 1994. We measure CEO's political preference in each year by their contribution to the political parties during the nearest election cycle. When CEO donates to both parties, the amount determines their party preference. *Independent* CEOs include those who donate to non party affiliated PACs or organizations and those who do not make donation at all during the nearest election cycle.

	Firms	Republican		Democratic		Independent	
1992	336	66	19.64%	30	8.93%	240	71.43%
1993	926	130	14.04%	96	10.37%	700	75.59%
1994	1,252	163	13.02%	108	8.63%	981	78.35%
1995	1,327	250	18.84%	90	6.78%	987	74.38%
1996	1,346	243	18.05%	91	6.76%	1,012	75.19%
1997	1,344	178	13.24%	66	4.91%	1,100	81.85%
1998	1,424	174	12.22%	68	4.78%	1,182	83.01%
1999	1,468	245	16.69%	62	4.22%	1,161	79.09%
2000	1,435	224	15.61%	49	3.41%	1,162	80.98%
2001	1,365	126	9.23%	74	5.42%	1,165	85.35%
2002	1,354	120	8.86%	74	5.47%	1,160	85.67%
2003	1,319	171	12.96%	63	4.78%	1,085	82.26%
2004	1,423	172	12.09%	68	4.78%	1,183	83.13%
2005	1,394	142	10.19%	50	3.59%	1,202	86.23%
2006	1,420	133	9.37%	51	3.59%	1,236	87.04%
2007	1,382	155	11.22%	84	6.08%	1,143	82.71%

Table 5
Sample Characteristics by Tax Avoidance

	BTD				SHELTER				DTAX				DD_TA		
	<Median	≥Median	t-Test		<80%	≥ 80%	t-Test		<Median	≥Median	t-Test		<Median	≥Median	t-Test
Total Assets ($mil.)	4,952.892	6,038.789	1,085.897***		3,110.535	15,092.680	11,982.150***		4,711.456	5,207.930	496.474*		5,928.669	5,471.041	-457.628
LEV	0.192	0.187	-0.005***		0.204	0.131	-0.073***		0.180	0.173	-0.007***		0.166	0.170	0.004*
E Index[1]	2.695	2.743	0.048***		2.746	2.619	-0.127***		2.696	2.683	-0.013		2.807	2.774	-0.033
$TACC/TA_{n-1}$[2]	-0.077	-0.045	0.032***		-0.069	-0.025	0.044***		-0.068	-0.049	0.019***		-0.042	-0.065	-0.023***
DAP[3]	-0.032	-0.017	0.015***		-0.035	0.020	0.055***		-0.028	-0.023	0.005***		-0.027	-0.032	-0.005**
PERMDIFF	-0.023	0.021	0.044***		-0.009	0.030	0.039***		-0.014	0.018	0.032***		0.004	0.024	0.020***
TXDI	-0.007	0.009	0.016***		0.000	0.004	0.004***		0.003	-0.002	-0.005***		-0.007	0.006	0.013***
Bonus/TD[4]	0.150	0.183	0.033***		0.162	0.182	0.020***		0.177	0.161	-0.016***		0.168	0.184	0.016***
Stock/TDC[5]	0.030	0.037	0.007***		0.030	0.047	0.017***		0.029	0.028	-0.001		0.047	0.044	-0.003
Option/TDC[6]	0.314	0.300	-0.014***		0.293	0.363	0.070***		0.294	0.330	0.036***		0.319	0.325	0.006
Delta ($mil.)[7]	0.709	0.888	-0.179***		0.586	1.654	-1.068***		0.833	0.899	-0.066**		0.970	1.019	-0.049
Vega($mil.)[8]	0.109	0.135	-0.026***		0.088	0.257	-0.169***		0.114	0.123	-0.009***		0.157	0.157	0.000

[1]E Index is an entrenchment index developed by Bebchuk, Cohen, and Ferrell (2009). The index ranges from 0 to 6, with higher numbers indicating more management entrenchment and therefore worse corporate governance.

[2]$TACC/TA_{n-1}$ is the total accrual using cash flow approach, which is calculated as income before extraordinary items minus cash flow from operating activities adjusted for extraordinary items and discontinued operations.

[3]DAP is the estimated discretionary accruals. Specifically, we apply the modified Jones model (Dechow et al., 1995) to estimate discretionary accruals. First we estimate the following cross-sectional regressions for each two-digit SIC code and year for the entire Compustat sample:

$$TACC_{jt}/TA_{jt-1}= \alpha 1/ TA_{jt-1}+\beta_1(\Delta Sale_{jt}-\Delta REC_{jt})/ TA_{jt-1}+ \beta_2 PPE_{jt}/ TA_{jt-1}$$

Where $\Delta SALE_{jt}$ is the change in sales for firm j in year t, ΔREC_{jt} is the change in accounts receivable, and PPE_{jt} is property, plant, and equipment for firm j at the end of year t. The estimated coefficients from this equation are then used to compute discretionary accruals DAP:

$$DAP_{jt}= TACC_{jt}/TA_{jt-1}- \hat{\alpha} 1/ TA_{jt-1}-\hat{\beta}_1(\Delta Sale_{jt}-\Delta REC_{jt})/ TA_{jt-1}- \hat{\beta}_2 PPE_{jt}/ TA_{jt-1}$$

[4]Bonus/TDC, [5]Stock/TDC, and [6]Option/TDC, refers to CEO's bonus, stock grants and the dollar amount of options granted, scaled by their total annual compensation.

[7]Delta and [8]Vega refer to CEO's sensitivity of wealth to stock price changes and stock return volatility changes. Details are defined in the text, Section 4 and page 20.

Table 6

Summary Statistics by CEOs' Political Preferences

This Table presents the summary statistics of the sample, sorted by CEO's political preferences. *TXDI* is the deferred tax expense (income account). All other variables are defined previously.

Panel A: Tax Avoidance

	Rep.		Dem.		Ind.		DIFF.		
	(1)		(2)		(3)		(1)-(3)	(2)-(3)	(1)-(2)
BTD	0.007		0.004		-0.011		0.018***	0.015***	0.003
$BTD(mil.)	89.616		98.535		32.271		57.345***	66.264***	-8.919
SHELTER	0.250		0.278		0.186		0.064***	0.092***	-0.028**
DTAX	0.011		0.010		0.009		0.002**	0.001	0.001
DD_TA	0.003		0.003		0.000		0.003**	0.003	0.000
Panel B: Firm Characteristics									
Total Assets ($mil.)	8,519.847		8,742.790		4,789.831		3,730.016***	3,952.959***	-222.943
LEV	0.205		0.193		0.187		0.018***	0.006	0.012**
E Index	2.756		2.563		2.724		0.032	-0.161***	0.193***
TACC/TA$_{n-1}$	-0.057		-0.053		-0.062		0.005*	0.009**	-0.004
DAP	-0.021		-0.031		-0.025		0.004*	-0.006***	0.010***
PERMDIFF	0.006		0.007		-0.003		0.009***	0.010***	-0.001
TXDI	0.001		0.0008		0.0005		0.0005	0.0003	0.0002
Panel C: CEO Incentives									
Bonus/TDC	0.182		0.181		0.163		0.019***	0.018***	0.001
Stock/TDC	0.030		0.028		0.035		-0.005	-0.007	0.002
Option/TDC	0.299		0.311		0.308		-0.009*	0.003	-0.012
Delta ($mil.)	1.158		1.376		0.701		0.457***	0.675***	-0.218***
Vega ($mil.)	0.159		0.172		0.112		0.047***	0.060***	-0.013*

Table 7

Tax Avoidance by CEOs' Political Preferences: Risk Incentives

This table presents firm's tax avoidance by CEO's political preferences by splitting the sample into those with higher equity-based incentives and those with lower incentives. The sample is divided by the median value of incentives.

Panel A: Tax avoidance by the sensitivity of CEO's wealth to stock volatility (Vega)

	Less Vega							More Vega						Diff.
	All	Rep.	Dem.	Ind.	Differences			All	Rep.	Dem.	Ind.	Differences		
	1	2	3	4	2-4	3-4		5	6	7	8	6-8	7-8	1-5
BTD	-0.019	0.001	-0.004	-0.023	0.024***	0.019**		0.003	0.012	0.009	0.000	0.012***	0.009*	-0.022***
SHELTER	0.104	0.119	0.163	0.099	0.020**	0.064***		0.294	0.356	0.351	0.278	0.078***	0.073***	-0.190***
DTAX	0.006	0.010	0.003	0.006	0.004**	-0.003		0.012	0.012	0.014	0.012	0.000	0.002	-0.006***
DD_TA	-0.001	0.002	0.001	-0.001	0.002*	0.002		0.001	0.004	0.003	0.001	0.003**	0.002	-0.002**

Panel B: Tax avoidance by the sensitivity of CEO's wealth to stock prices (Delta)

	Less Delta							More Delta						Diff.
	All	Rep.	Dem.	Ind.	Differences			All	Rep.	Dem.	Ind.	Differences		
	1	2	3	4	2-4	3-4		5	6	7	8	6-8	7-8	1-5
BTD	-0.020	-0.003	-0.002	-0.023	0.020***	0.021**		0.004	0.014	0.009	0.002	0.012***	0.007*	-0.024***
SHELTER	0.092	0.115	0.098	0.090	0.025***	0.008		0.306	0.334	0.362	0.295	0.039***	0.068***	-0.214***
DTAX	0.007	0.012	0.007	0.007	0.005**	0.000		0.011	0.011	0.012	0.011	0.000	0.001	-0.004***
DD_TA	-0.001	0.002	-0.0004	-0.001	0.003*	0.0006		0.002	0.003	0.005	0.001	0.002*	0.004*	-0.003**

Table 8

Tax Avoidance by CEOs' Political Preferences: Corporate Governance and Option Incentives

This table presents firm's tax avoidance by splitting the sample into those with better corporate governance and those with lower governance. The sample is divided by the median value of E Index. Higher E Index refers to lower governance and lower E Index refers to better governance. Panel A reports the results for the overall sample. Panel B reports the results for those with lower governance, splitting sample by CEO's option granted. And Panel C reports the results for those with higher governance.

Panel A: Tax avoidance by Corporate Governance

	Lower Governance							Better Governance						Diff.
	All	Rep.	Dem.	Ind.	Differences			All	Rep.	Dem.	Ind.	Differences		
	1	2	3	4	2-4	3-4		5	6	7	8	6-8	7-8	1-5
BTD	0.001	0.013	0.013	-0.002	0.015***	0.015***		-0.008	0.007	0.001	-0.011	0.018***	0.012*	0.009***
SHELTER	0.198	0.243	0.236	0.188	0.055***	0.048***		0.229	0.276	0.319	0.215	0.061***	0.104***	-0.031***
DTAX	0.009	0.009	0.010	0.008	0.001	-0.001		0.011	0.014	0.010	0.010	0.004*	0.000	-0.002**
DD_TA	0.001	0.005	0.005	-0.0004	0.0054***	0.0054**		0.001	-0.0004	0.0004	0.001	-0.0014	-0.0006	0.000

Panel B: Tax avoidance by Options: Lower Governance

	Lower Option/TDC							Higher Option/TDC						Diff.
	All	Rep.	Dem.	Ind.	Differences			All	Rep.	Dem.	Ind.	Differences		
	1	2	3	4	2-4	3-4		5	6	7	8	6-8	7-8	1-5
BTD	0.005	0.012	0.010	0.003	0.009**	0.007		-0.003	0.013	0.016	-0.007	0.020***	0.023***	0.008***
SHELTER	0.157	0.198	0.162	0.149	0.049***	0.013		0.242	0.292	0.315	0.228	0.064***	0.087***	-0.085***
DTAX	0.006	0.008	0.005	0.006	0.002*	-0.001		0.011	0.010	0.015	0.011	-0.001	0.004	-0.005***
DD_TA	0.000	0.003	0.009	-0.001	0.004*	0.008***		0.002	0.008	0.002	0.001	0.007***	0.001	-0.002

Panel C: Tax avoidance by Options: Better Governance

	Lower Option/TDC							Higher Option/TDC						Diff.
	All	Rep.	Dem.	Ind.	Differences			All	Rep.	Dem.	Ind.	Differences		
	1	2	3	4	2-4	3-4		5	6	7	8	6-8	7-8	1-5
BTD	-0.003	0.015	0.003	-0.007	0.022***	0.010		-0.012	-0.002	-0.001	-0.014	0.012**	0.013*	0.009***
SHELTER	0.185	0.211	0.292	0.174	0.037**	0.118***		0.269	0.334	0.342	0.253	0.081***	0.089***	-0.084***
DTAX	0.007	0.010	0.007	0.007	0.003*	0.000		0.014	0.016	0.014	0.013	0.002	0.001	-0.007***
DD_TA	0.017	0.007	0.003	0.001	0.006*	0.002		0.000	-0.005	-0.002	0.001	-0.006**	-0.003	0.017

48

Table 9

Results: Political Affiliation vs. Aggressiveness

This table presents the summary of the univariate results of the effects of CEOs on tax avoidance. Two competing hypotheses are tested: the individual effects of political preference and of conservatism. Panel A reports the results for the political hypothesis and panel B for the conservatism hypothesis.

Panel A. Summary of results for the political hypothesis.

	Political Hypothesis						
	Republican				Democratic		
	All	Low Risk Incentives	High Risk Incentives		All	Low Risk Incentives	High Risk Incentives
Shelter	√	√	√(+)		X	X	X
DTAX	√	√	√(No)		X	X	X
DD_TA	√	√	√(+)[a]		X	X	X

[a] This is true except for one case where both option is high and governance is better.

Panel B. Summary of results for the conservatism hypothesis.

	Conservatism vs. Aggressiveness						
	Republican (conservatism)				Democratic (Aggressiveness)		
	All	Low Risk Incentives	High Risk Incentives		All	Low Risk Incentives	High Risk Incentives
Shelter	X	X	X		√	√	√(+)
DTAX	X	X	√(No)		X	X	√(No)
DD_TA	X	X	X[a]		X	√	√(No)

[a] This is true except for one case where both option is high and governance is better.

Table 10

Results for Regressions of Measures of Tax Avoidance on CEOs' Political Preferences

This table presents the results for the regression analysis of the effects of CEO's political preferences on the 4 measures of tax avoidance. All regressions except for models 5 to 8 are conducted by using OLS regressions and models 5 to 8 use logit regressions. Results are reported for the whole sample when data is available and for the subsamples defined by CEO's delta. *DAP* is controlled for the analyses of *BTD* and *DTAX* because earning management is not excluded when calculating these two measures of tax avoidance. *TXDI* is controlled for *DD_TA* because *DD_TA* includes temporary tax avoidance. All other variables are defined previously. Year and 2-digit SIC industry effects are included in all models. The reported p-values in the parentheses reflect White's heteroskedasticity correction. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels respectively.

	BTD (OLS)					SHELTER (Logit)					DTAX (OLS)					DD_TA (OLS)			
	All	All	Low Delta	High Delta		All	All	Low Delta	High Delta		All	All	Low Delta	High Delta		All	All	Low Delta	High Delta
	1	2	3	4		5	6	7	8		9	10	11	12		13	14	15	16
REP	0.018*** (0.000)	0.006** (0.019)	0.002 (0.679)	0.011*** (0.000)		0.442*** (0.000)	0.141** (0.014)	0.274** (0.020)	0.251*** (0.000)		0.004*** (0.001)	0.003** (0.032)	0.006*** (0.002)	0.001 (0.749)		0.003** (0.031)	0.002** (0.048)	0.004** (0.017)	0.002 (0.320)
DEM	0.017*** (0.000)	0.006 (0.103)	0.006 (0.312)	0.009** (0.039)		0.668*** (0.000)	0.220*** (0.008)	0.155 (0.430)	0.377*** (0.000)		0.002 (0.336)	0.002 (0.436)	0.001 (0.685)	0.001 (0.845)		0.004* (0.075)	0.004** (0.018)	0.001 (0.782)	0.007*** (0.007)
Bonus/TDC		0.079*** (0.000)	0.102*** (0.000)	0.055*** (0.000)			1.210*** (0.000)	2.621*** (0.000)	0.857*** (0.000)			0.009*** (0.004)	0.017*** (0.001)	0.002 (0.668)			0.013*** (0.000)	0.023*** (0.000)	0.006 (0.330)
Stock/TDC		0.001 (0.716)	0.010 (0.351)	0.001 (0.949)			0.181* (0.082)	0.295 (0.174)	0.094 (0.435)			0.006* (0.069)	0.016** (0.020)	0.001 (0.665)			0.003 (0.325)	0.008* (0.078)	-0.002 (0.740)
Option/TDC		-0.008 (0.198)	-0.008 (0.403)	-0.005 (0.493)			0.249*** (0.003)	0.649*** (0.000)	0.255*** (0.008)			0.004 (0.122)	0.004 (0.306)	0.003 (0.406)			0.005** (0.035)	0.010*** (0.006)	0.002 (0.601)
LnDelta		0.006*** (0.000)					0.536*** (0.000)					0.001 (0.838)					0.001*** (0.000)		
LnVega		0.001 (0.339)	0.002*** (0.000)	0.000 (0.930)			0.105*** (0.000)	0.035** (0.034)	0.113*** (0.000)			-0.001 (0.838)	-0.001 (0.523)	0.001 (0.611)			0.0002* (0.087)	0.0005** (0.026)	0.0003 (0.210)
MTB		-0.001 (0.167)	-0.001 (0.642)	-0.001*** (0.000)			-0.001 (0.553)	-0.001 (0.609)	-0.001 (0.588)			0.001 (0.536)	0.001*** (0.000)	-0.004 (0.464)			0.001** (0.011)	0.001*** (0.000)	0.001** (0.011)
Hitech		-0.013** (0.012)	-0.017* (0.079)	-0.006 (0.306)			0.078 (0.246)	0.072 (0.544)	0.080 (0.315)			0.005* (0.060)	0.003 (0.435)	0.007** (0.041)			0.002 (0.270)	-0.003 (0.267)	0.006** (0.013)
REP President		-0.003 (0.633)	0.005 (0.613)	0.017** (0.021)			1.002*** (0.000)	1.301*** (0.000)	0.733*** (0.002)			-0.003 (0.327)	-0.006 (0.197)	-0.001 (0.909)			0.016*** (0.000)	0.013*** (0.004)	0.014* (0.079)
LogAT		0.025*** (0.000)	0.050*** (0.000)	0.007*** (0.009)								0.003*** (0.005)	0.006*** (0.006)	0.001 (0.869)			-0.002*** (0.000)	-0.003*** (0.000)	-0.002*** (0.001)
FOREIGN		0.005* (0.100)	0.005 (0.297)	0.007* (0.067)								0.001 (0.374)	0.01 (0.815)	0.002 (0.376)			-0.007*** (0.000)	-0.007*** (0.000)	-0.005*** (0.008)
LEV		-0.050*** (0.000)	-0.064*** (0.000)	-0.056*** (0.000)								0.006 (0.201)	0.008 (0.186)	0.004 (0.547)			-0.017*** (0.000)	-0.011** (0.037)	-0.027*** (0.000)

DAP		0.132** (0.000)	0.139*** (0.000)	0.124*** (0.000)								0.072*** (0.000)	0.082*** (0.000)	0.063*** (0.000)					
TXDI																	1.706*** (0.000)	1.733*** (0.000)	1.670*** (0.000)
Year & Ind. Effects	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Obs.	20,515	20,471	9,797	9,800		20,515	20,473	9,561			13,549	13,523	6,195	6,728		10,310	7,812	3,910	
Adj. R²	0.028	0.067	0.083	0.057		0.093	0.190	0.119			0.018	0.064	0.060	0.082		0.072	0.397	0.423	

Table 11

Results for CEO Fixed Effects of Tax Avoidance on CEOs' Political Preferences

This table presents results for the fixed effects of CEO's political preference on firm's tax avoidance. The sample includes all the firms that do not change CEOs during the sample period. Note that in order to capture more changes in the likelihood of engaging shelters, we replace the dummy variable of SHELTER with the probability of sheltering, calculated from the prediction score obtained from equation 2. Year effects are included in all models. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels respectively. Within group R^2 with firm clustered standard errors are reported.

	BTD (XTREG)			SHELTERProb (XTREG)			DTAX (XTREG)			DD_TA (XTREG)	
REP	**0.003** **(0.670)**			**0.004** **(0.474)**			**0.008**** **(0.015)**			**0.008**** **(0.015)**	
DEM		**-0.002** **(0.786)**			**0.006** **(0.297)**			**-0.002** **(0.656)**			**-0.007** **(0.110)**
MTB	-0.001*** (0.000)	-0.001*** (0.000)		-0.001*** (0.000)	-0.001*** (0.000)		-0.001** (0.020)	-0.001** (0.022)		0.001*** (0.000)	0.001*** (0.000)
REPPresident	0.007 (0.548)	0.007 (0.546)		-0.009 (0.476)	-0.009 (0.480)		-0.004 (0.547)	-0.004 (0.519)		0.007 (0.311)	0.006 (0.363)
E Index	0.009* (0.095)	0.009* (0.094)		0.007 (0.107)	0.007 (0.104)		-0.003 (0.306)	-0.003 (0.318)		-0.001 (0.321)	-0.001 (0.290)
LogAT	-0.026 (0.249)	-0.026 (0.254)					-0.016* (0.092)	-0.016 (0.103)		-0.001 (0.873)	-0.001 (0.936)
DAP	0.141*** (0.000)	0.141*** (0.000)					0.076*** (0.000)	0.076*** (0.000)			
FOREIGN	-0.006 (0.676)	-0.006 (0.674)					-0.002 (0.608)	-0.003 (0.591)		-0.010 (0.275)	-0.010 (0.280)
LEV	-0.110*** (0.000)	-0.110*** (0.000)					0.011 (0.431)	0.011 (0.440)		-0.019* (0.088)	-0.020* (0.069)
TXDI										1.592*** (0.000)	1.594*** (0.000)
Year Effects	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Obs.	5,635	5,635		5,636	5,636		3,709	3,709		3,016	3,016
Within Group R^2 (clustered standard errors)	0.032	0.032		0.029	0.029		0.046	0.045		0.329	0.328

52

Table 12

Results for Regressions of Measures of Tax Avoidance on CEOs' Political Preferences: by Corporate Governance

This table presents the results for the regression analysis of the effects of CEO's political preferences on the 4 measures of tax avoidance by splitting the sample into those with lower corporate governance (or higher E Index) and those with better corporate governance (or lower E Index). All regressions except for *Shelter* are conducted by using OLS regressions and *Shelter* is conducted by using logit regressions. *DAP* is controlled for the analyses of *BTD* and *DTAX* because earning management is not excluded when calculating these two measures of tax avoidance. *TXDI* is controlled for *DD_TA* because *DD_TA* includes temporary tax avoidance. All other variables are defined previously. Year and 2-digit SIC industry effects are included in all models. The reported p-values in the parentheses reflect White's heteroskedasticity correction. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels respectively.

| | *BTD* | | | *Shelter* | | | *DTAX* | | | *DD_TA* | |
	E ≥ Median Lower Gov.	E < Median Better Gov.		E ≥ Median Lower Gov.	E < Median Better Gov.		E ≥ Median Lower Gov.	E < Median Better Gov.		E ≥ Median Lower Gov.	E < Median Better Gov.
REP	**0.006***	**0.008***		**0.073**	**0.091**		**0.001**	**0.003***		**0.002**	**0.001**
	(0.051)	**(0.079)**		**(0.391)**	**(0.320)**		**(0.517)**	**(0.087)**		**(0.731)**	**(0.449)**
DEM	**0.010****	**0.002**		**0.033**	**0.183**		**0.002**	**0.001**		**0.004**	**0.007****
	(0.013)	**(0.766)**		**(0.809)**	**(0.145)**		**(0.466)**	**(0.840)**		**(0.372)**	**(0.034)**
MTB	-0.001***	-0.001		-0.001	-0.004		-0.001	-0.001		0.001**	0.001*
	(0.000)	(0.145)		(0.825)	(0.137)		(0.865)	(0.601)		(0.014)	(0.089)
Hitech	-0.010	0.005		0.234**	0.059		0.004	0.008*		0.003	0.002
	(0.172)	(0.596)		(0.030)	(0.576)		(0.228)	(0.057)		(0.404)	(0.498)
REPPresident	-0.002	0.014*		1.028***	0.880***		-0.002	0.009**		0.017*	0.012**
	(0.834)	(0.089)		(0.001)	(0.001)		(0.596)	(0.032)		(0.072)	(0.017)
Bonus/TDC	0.085***	0.057***		1.502***	1.175***		0.003	0.001		0.017*	0.014***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.551)	(0.368)		(0.066)	(0.002)
Stock/TDC	-0.001	0.012		0.182	0.231		0.007	0.003		0.008	0.003
	(0.912)	(0.207)		(0.155)	(0.239)		(0.108)	(0.570)		(0.250)	(0.494)
Option/TDC	-0.007	-0.014		0.312**	0.163		0.001	0.004		0.005	0.007**
	(0.413)	(0.106)		(0.023)	(0.204)		(0.844)	(0.311)		(0.280)	(0.030)
LnDelta	0.007***	0.007***		0.598***	0.531***		0.001			0.001	0.001***
	(0.000)	(0.000)		(0.023)	(0.000)		(0.324)			(0.847)	(0.000)
LnVega	0.001	0.001*		0.087***	0.127***		0.001			-0.001	0.001
	(0.196)	(0.064)		(0.000)	(0.000)		(0.504)			(0.914)	(0.120)
LogAT	0.010***	0.019***					0.001	0.001		-0.002**	-0.003***
	(0.003)	(0.000)					(0.555)	(0.368)		(0.037)	(0.000)

53

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FOREIGN	-0.015*** (0.001)	0.004 (0.326)			0.003* (0.088)	-0.002 (0.284)	-0.005* (0.096)	-0.004* (0.074)
LEV	-0.048*** (0.000)	-0.060*** (0.000)			0.012* (0.091)	0.004 (0.550)	-0.009 (0.240)	-0.024*** (0.000)
DAP	0.140*** (0.000)	0.113*** (0.000)			0.062*** (0.000)	0.086*** (0.000)		
TXDI							1.455*** (0.000)	1.930*** (0.000)
Year and industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	8,430	7,694	8,303	7,535	5,452	5,206	2,045	3,508
Adj. R^2	0.064	0.076	0.186	0.215	0.072	0.080	0.370	0.461

Table 13

Results for CEO Fixed Effects of Tax Avoidance on CEOs' Political Preferences: by Corporate Governance

This table presents the results for the regression analysis of the fixed effects of CEO's political preferences on the 2 discretionary measures of tax avoidance by splitting the sample into those with lower corporate governance (or higher E Index) and those with better corporate governance (or lower E Index). The sample includes all the firms that do not change CEOs during the sample period. Year effects are included in all models. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels respectively. Within group R^2 with firm clustered standard errors are reported.

	DTAX (XTREG)				DD_TA (XTREG)			
	E ≥ Median Lower Gov.		E < Median Better Gov.		E ≥ Median Lower Gov.		E < Median Better Gov.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
REP	**0.002** **(0.705)**		**0.017***** **(0.003)**		**0.002** **(0.702)**		**0.013***** **(0.005)**	
DEM		**-0.005** **(0.513)**		**-0.004** **(0.558)**		**-0.014**** **(0.021)**		**-0.007** **(0.280)**
MTB	0.001 (0.235)	0.001 (0.237)	-0.001*** (0.005)	-0.001*** (0.000)	0.001 (0.161)	0.001 (0.163)	0.001** (0.023)	0.002** (0.026)
REPPresident	-0.014 (0.103)	-0.013 (0.118)	0.006 (0.531)	0.004 (0.673)	0.002 (0.827)	0.001 (0.891)	0.015* (0.083)	0.012 (0.152)
LogAT	-0.014 (0.113)	-0.013 (0.119)	-0.022 (0.171)	-0.022 (0.164)	0.006 (0.484)	0.006 (0.430)	-0.003 (0.532)	-0.003 (0.523)
FOREIGN	0.012* (0.091)	0.011* (0.095)	-0.016** (0.013)	-0.019*** (0.010)	-0.015 (0.435)	-0.015 (0.439)	-0.007 (0.390)	-0.007 (0.413)
LEV	0.025 (0.157)	0.026 (0.146)	0.003 (0.886)	0.010 (0.625)	-0.046 (0.179)	-0.046 (0.181)	-0.007 (0.460)	-0.009 (0.353)
DAP	0.055*** (0.006)	0.054*** (0.006)	0.092*** (0.000)	0.098** (0.000)				
TXDI					1.137** (0.013)	1.136** (0.013)	1.783*** (0.000)	1.782*** (0.000)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,809	1,812	1,895	1,894	823	823	1,361	1,361
Within Group R^2 (clustered standard errors)	0.053	0.047	0.068	0.067	0.209	0.212	0.428	0.424

Table 14

Results for CEO Fixed Effects of Tax Avoidance on CEOs' Political Preferences: By Presidents

This table presents results for the fixed effects of CEO's political preference on firm's tax avoidance by splitting the smaple into those with Democratic President and those with Republican President. The sample includes all the firms that do not change CEOs during the sample period. Note that in order to capture more changes in the likelihood of engaging shelters, we replace the dummy variable of *SHELTER* with the probability of sheltering, calculated from the prediction score obtained from equation 2. *Presidential Approval:* we collect the presidential approval rating by party affiliation from Gallup and assign them to CEOs by year and their political preference. Those non-party affiliated CEOs (Independent CEOs) are given the overall rate. Year effects are included in all models. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels respectively. Within group R^2 with firm clustered standard errors are reported.

	BTD (XTREG)			SHELTERProb (XTREG)			DTAX (XTREG)			DD_TA (XTREG)	
	Dem.	Rep.		Dem.	Rep.		Dem.	Rep.		Dem.	Rep.
Presidential Approval	**0.001** (0.608)	**0.001*** (0.093)		**0.001** (0.504)	**0.005**** (0.022)		**-0.001** (0.328)	**0.001** (0.313)		**-0.001** (0.547)	**0.001*** (0.087)
MTB	-0.001*** (0.000)	-0.001*** (0.000)		-0.010*** (0.001)	-0.001*** (0.000)		-0.001*** (0.000)	0.001 (0.196)		0.001** (0.018)	0.001 (0.345)
E Index	0.017** (0.016)	0.002 (0.711)		0.169** (0.012)	0.017 (0.719)		-0.001 (0.977)	-0.004 (0.352)		-0.001 (0.887)	-0.001 (0.534)
LogAT	-0.087* (0.071)	-0.093*** (0.010)					0.0015 (0.761)	-0.034** (0.045)		-0.005 (0.540)	0.001 (0.935)
FOREIGN	-0.011 (0.552)	-0.020 (0.107)					-0.011 (0.171)	0.001 (0.839)		-0.022 (0.238)	-0.001 (0.882)
LEV	-0.071 (0.147)	-0.076* (0.060)					0.055** (0.015)	-0.025 (0.301)		-0.043* (0.086)	-0.009 (0.417)
DAP	0.071* (0.072)	0.129*** (0.006)					0.027 (0.104)	0.101*** (0.000)			
TXDI										2.293*** (0.000)	1.486*** (0.000)
Year Effects	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes
Obs.	2,364	3,271		2,365	3,271		1,605	2,070		1,201	1,815
Within Group R^2 (clustered standard errors)	0.050	0.033		0.023	0.044		0.080	0.042		0.472	0.345

Table 15

Tax Avoidance: Before and After 2003 Dividend Tax Cut

This table shows the summary statistics of firm's tax avoidance before and after the 2003 dividend tax cut. Panel A first shows the percentage of firms paying dividends around this tax cut by splitting the sample into those with CEOs with lower delta and those with higher delta. Panel B shows the dividend results by splitting the sample by CEO's vega. Panel 3 reports the results of the firm's tax avoidance before and after the 2003 tax cut for the whole sample and for the subsamples divided by CEO's delta. Panel D splits the sample by CEO's vega.

Panel A: Dividend by Delta

	Low Delta					High Delta				Diff.
	All	Before	After	Differences		All	Before	After	Differences	
	1	2	3	2-3		4	5	6	5-6	1-4
Dividend Dummy	0.534	0.584	0.413	0.171***		0.541	0.532	0.554	-0.022***	-0.007

Panel B: Dividend by Vega

	Low Vega					High Vega				Diff.
	All	Before	After	Differences		All	Before	After	Differences	
	1	2	3	2-3		4	5	6	6-8	1-4
Dividend Dummy	0.511	0.541	0.422	0.119***		0.570	0.595	0.537	0.058***	-0.059***

Panel C: Tax Avoidance by Delta

	All				Low Delta				High Delta		
	Before	After	Differences		Before	After	Differences		Before	After	Differences
	1	2	1-2		3	4	3-4		5	6	5-6
BTD	-0.011	-0.002	-0.009***		-0.018	-0.024	0.006*		-0.002	0.015	-0.017***
SHELTER	0.177	0.242	-0.065***		0.089	0.101	-0.012**		0.277	0.350	-0.073***
DTAX	0.009	0.008	0.001		0.008	0.006	0.002		0.012	0.011	0.001
DD_TA	-0.001	0.003	-0.004***		-0.002	0.002	-0.004**		-0.0002	0.004	-0.0042***

Panel D: Tax Avoidance by Vega

	Low Vega				High Vega		
	Before	After	Differences		Before	After	Differences
	3	4	3-4		5	6	5-6
BTD	-0.019	-0.020	0.001		-0.001	0.008	-0.009***
SHELTER	0.097	0.127	-0.030***		0.282	0.310	-0.028***
DTAX	0.007	0.005	0.002		0.013	0.011	0.002**
DD_TA	-0.002	0.003	-0.005***		-0.0004	0.003	-0.0034***

Table 16

Tax Avoidance by CEOs' Political Preferences: Before and After 2003 Dividend Tax Cut

This table shows the summary statistics of the effects of CEO's political preference on firm's tax avoidance before and after the 2003 dividend tax cut. Panel A presents the results for the total sample, Panel B for the subsample of the firms with CEOs with lower than the median delta, Panel C for the subsample of the firms with CEOs with higher than and equal to the median delta. Panels D and E split the sample by CEO's vega.

Panel A: All

	Republican				Democratic				Independent				Diff			
	Before	After	Differences		Before	After	Differences		Before	After	Differences		Before		After	
	1	2	1-2		3	4	3-4		5	6	5-6		1-5	3-5	2-6	4-6
BTD	0.002	0.021	-0.019***		0.001	0.010	-0.009*		-0.014	-0.006	-0.008***		***	***	***	**
SHELTER	0.229	0.304	-0.075***		0.260	0.323	-0.063**		0.162	0.230	-0.068***		***	***	***	***
DTAX	0.012	0.011	0.001		0.009	0.012	-0.003		0.009	0.008	0.001		*			
DD_TA	0.001	0.009	-0.008***		-0.002	0.013	-0.015***		-0.001	0.002	-0.003***		*		***	***

Panel B: Low Delta

	Republican				Democratic				Independent				Diff			
	Before	After	Differences		Before	After	Differences		Before	After	Differences		Before		After	
	1	2	1-2		3	4	3-4		5	6	5-6		1-5	3-5	2-6	4-6
BTD	-0.005	0.006	-0.011*		-0.006	0.009	-0.015		-0.021	-0.027	0.006*		***	*	**	*
SHELTER	0.118	0.102	0.016		0.096	0.105	-0.011		0.085	0.101	-0.016***		***			
DTAX	0.011	0.019	-0.008**		0.008	0.006	0.002		0.007	0.005	0.002		**		**	
DD_TA	0.000	0.010	-0.010**		-0.005	0.013	-0.018**		-0.002	0.001	-0.003*				*	

Panel C: High Delta

	Republican				Democratic				Independent				Diff			
	Before	After	Differences		Before	After	Differences		Before	After	Differences		Before		After	
	1	2	1-2		3	4	3-4		5	6	5-6		1-5	3-5	2-6	4-6
BTD	0.007	0.026	-0.019***		0.008	0.012	-0.004		-0.006	0.013	-0.019***		***	**	***	
SHELTER	0.313	0.374	-0.061***		0.346	0.396	-0.050*		0.261	0.343	-0.082***		***	***	*	**
DTAX	0.012	0.008	0.004		0.011	0.013	-0.002		0.012	0.011	0.001					
DD_TA	0.002	0.008	-0.006**		0.000	0.013	-0.013***		-0.001	0.002	-0.003**				**	***

Panel D: Low Vega

	Republican				Democratic				Independent				Diff			
	Before	After	Differences		Before	After	Differences		Before	After	Differences		Before		After	
	1	2	1-2		3	4	3-4		5	6	5-6		1-5	3-5	2-6	4-6
BTD	-0.003	0.020	-0.023***		-0.007	0.011	-0.018**		-0.022	-0.025	0.003		***	**	***	*
SHELTER	0.106	0.178	-0.072***		0.165	0.154	0.011		0.091	0.121	-0.030***		*	***	***	
DTAX	0.010	0.012	-0.002		0.002	0.009	-0.007		0.006	0.004	0.002		**		*	
DD_TA	0.001	0.008	-0.007**		-0.002	0.013	-0.015**		-0.002	0.002	-0.004**		*		*	*

Panel E: High Vega

	Republican				Democratic				Independent				Diff			
	Before	After	Differences		Before	After	Differences		Before	After	Differences		Before		After	
	1	2	1-2		3	4	3-4		5	6	5-6		1-5	3-5	2-6	4-6
BTD	0.007	0.021	-0.014***		0.009	0.010	-0.001		-0.003	0.006	-0.009***		**	**	***	
SHELTER	0.359	0.352	0.007		0.337	0.378	-0.041		0.261	0.298	-0.037***		***	***	***	***
DTAX	0.013	0.010	0.003		0.015	0.012	0.003		0.013	0.010	0.003*					
DD_TA	0.001	0.009	-0.008**		-0.002	0.013	-0.015***		-0.0005	0.002	-0.0025*				***	***