DO TAX AGGRESSIVE EXECUTIVES INFLUENCE CORPORATE PHILANTHROPY?

BY

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DISSERTATION

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ABSTRACT

This study examines whether personally tax aggressive executives pursue corporate philanthropy. Relative to a control group, corporate philanthropy increases by 3.0 percent, on average, following personal tax aggression events by executives. Put another way, every $1 of personal tax gain by executives is associated with $2.01 of corporate resources spent on corporate philanthropy. Further analyses suggest that the positive association between corporate philanthropy and executive-level tax aggression is consistent with a behavioral theory. In an environment where a social norm for paying a "fair share" of taxes exists, personally tax aggressive executives might experience disutility from violating the social norm, leading them to engage in compensatory activities to mitigate disutility. Consistent with this idea, personally tax aggressive executives pursue greater corporate philanthropy, presumably to "cleanse" themselves of such tax-related disutility.

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CHAPTER 1: INTRODUCTION

Aggressive tax planning raises the cost of tax collection, distorts the distribution of the tax burden, and erodes government revenue (Slemrod and Bakija 2017; Slemrod 2018).[1] Because such behavior violates the social norm for equity in tax payments (Luttmer and Singhal 2014), numerous interest groups (e.g., Americans for Tax Fairness) pressure both individuals and large corporations to "pay their fair share" of taxes. While such groups often claim that higher costs of tax collection and erosion of tax revenue *reduces* funding for Social Security, healthcare, education, and infrastructure, aggressive tax planning can partly *increase* funding for such social objectives if the tax-sheltered resources are channeled directly to the non-profit sector. Therefore, in this study, I examine the association between funding for social objectives and aggressive tax planning using data on *corporate* philanthropy and *personal* tax aggression by top corporate executives (i.e., Board Chairman, Chief Executive Officer, Chief Operations Officer, Chief Financial Officer, and President). I then test whether two competing behavioral explanations drive any observed association.

In an environment where the social norm for equity in tax payments is salient, individuals exhibiting tax aggression could have preferences for activities, such as donations to charities, that "undo" the negative effect of violating the social norm on their utility.[2] Thus, some individuals could be aggressive in tax planning while being altruistic, resulting in a positive relation between funding for social goods and aggressive tax planning. However, individual belief or corporate

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[1] Tax aggressiveness is defined as the use of tax planning strategies with "weak legal support" (Lisowsky, Robinson, and Schmidt 2013, 590) that "push the envelope of tax law" (Hanlon and Heitzman 2010, 137). See Chapter 2.2 for details.

[2] See Baumeister, Stillwell, and Heatherton (1994) and Battigalli and Dufwenberg (2007) for more on disutility that arises as a result of misbehaving. Also see Zhong and Liljenquist (2006); Sachdeva, Iliev, and Medin (2009); and Gneezy, Imas, and Madarasz (2014) for studies on the relation between misbehavior and prosocial behavior.

attitude could also give rise to the positive relation. For example, when asked about raising the top marginal tax rate to 70 percent at the 2019 World Economic Forum, the Chief Executive Officer of Dell Technologies stated that having established a private foundation, he felt "much more comfortable" in the private foundation's ability to allocate resources for funding social objectives than in the efficiency of the tax system.[3] Individuals with such distrust in the efficiency of the tax system could choose to be tax aggressive while exhibiting a willingness to directly support social objectives.

These two potential explanations for a positive relation between corporate philanthropy (funding for social objectives) and executive-level personal tax aggression (aggressive tax planning) stem from psychology and behavioral economics. Specifically, the first explanation is often referred to as "moral cleansing" in psychology (Zhong and Liljenquist 2006) or "conscience accounting" in behavioral economics (Gneezy et al. 2014). The idea is grounded in the assumption that there are costs associated with the act of misbehaving, contrary to some economic models that do not specify disutility in the act of misbehaving. For example, in Allingham and Sandmo's (1972) personal tax evasion model, the cost of personal tax evasion is a function of the probability of detection and the penalty rate that must be paid once detected, while the disutility associated with the act of tax evasion is ignored.[4] Incorporating the cost of misbehaving, the moral cleansing hypothesis and conscience accounting model suggest that individuals will engage in prosocial activities to offset the disutility of misbehaving.

The second explanation is referred to as "individual beliefs," and there is a growing literature on how managerial beliefs, observed characteristics, and lifetime experiences influence

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[3] See "Dell CEO Joins Davos Debate on 70% Tax Rate: 'Not Supportive',"
https://www.bloomberg.com/news/articles/2019-01-23/dell-ceo-joins-davos-debate-on-70-tax-rate-not-supportive.
[4] Discussed in Gneezy et al. (2014), disutility emerges as a result of violating an individual's internalized norm and/or failing to meet others' expectations.

corporate-level decisions that managers make (Cronqvist, Makhija, and Yonker 2012; Chyz 2013; Malmendier, Tate, and Yan 2011; Law and Mills 2017; Malmendier 2018). Individual managers may hold beliefs and preferences with respect to their personal tax planning, corporate tax planning, and philanthropic activities. For example, managers could question the government's ability to efficiently distribute resources gathered through its tax system. This skepticism in the efficiency of the tax system could, in turn, lead managers to be aggressive with their personal and corporate tax planning and to inject some of the tax-sheltered resources to the non-profit sector with either their own resources or corporate philanthropy, or both.

To begin, I first examine whether corporate philanthropy is increasing in executive-level personal tax aggression. I obtain firm-level philanthropic activities panel data gathered by the Foundation Center. This nonprofit organization collects information on corporate philanthropy from both the grant-making corporations and public records such as IRS filings (e.g., Form 990-PF).[5] The Center gathers grant-level information on both grants made by (1) corporate-sponsored foundations and (2) corporate giving programs, which are accessible through its online directory, Foundation Directory Online (FDO).

I then identify executives' personal tax aggressiveness by focusing on executives' backdating of stock option exercises to days with relatively low stock prices. Backdating option exercises is the act of marking an option exercise transaction to a date that precedes the actual exercise date. Since backdating option exercises to obtain tax savings is accomplished through transactions between executives and their firms and is unlikely to involve third parties (e.g., broker), stock option exercise backdating can provide desired tax savings to executives with limited third-party monitoring of executives' tax aggressiveness. Prior research validates this

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[5] For more information on the Foundation Center's data collection efforts and data sources, please visit https://foundationcenter.org.

approach as a proxy for executive-level personal tax aggression (Cicero 2009; Dhaliwal, Erickson, and Heitzman 2009; Chyz 2013; Biggerstaff, Cicero, and Puckett 2015). More specifically, using information on corporate insider's stock and option transactions provided by the Thomson Financial Insider Filing Database, I flag an option exercise transaction as a "suspect" exercise if stock prices around the option exercise are consistent with manipulating the exercise date to under-report ordinary taxable income. I label executives that initiate a suspect exercise as a "suspect executive."[6]

Using a difference-in-differences design that exploits multiple suspect exercise events, I find that corporate philanthropy increases by 3.0 percent, on average, after suspect exercise events. This finding is relative to corporate philanthropy of firms not exposed to suspect exercise events. A 3.0 percent increase in corporate philanthropy corresponds to $21,900 increase in cash outlays. While this dollar amount may seem immaterial, it is indeed economically significant when compared to the average size of philanthropic grants (between $21,300 and $21,700) by foundations with assets of more than $10 million in 2016.[7] In addition to examining the intensive margin response to suspect exercise events, I conduct an analysis for the extensive margin response with an indicator variable for positive corporate philanthropy. The extensive margin analysis is important for understanding whether the above finding is coming from either the initiation of corporate philanthropic practices or from the increase in the amount of corporate philanthropy by already existing corporate philanthropy programs. I fail to find a statistically significant extensive margin response to suspect exercise events. Therefore, the positive association between corporate philanthropy and executive-level personal tax aggression seems to

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[6] I review the mechanics of using stock option exercise backdating to make personal tax gains and legal implications of backdating practices in Chapter 3.1.1.
[7] See "Average Grant Sizes Increased in 2016, Foundation Source Finds," PND by Candid, July 29, 2017, https://philanthropynewsdigest.org/news/average-grant-sizes-increased-in-2016-foundation-source-finds.

be driven by the increase in philanthropic activities by firms that already had ongoing philanthropic practices.

Next, I investigate whether the moral cleansing or individual beliefs explanation is more or less descriptive of the observed positive relation. Specifically, I consider the heterogeneity in the effect of corporate executives' personal tax aggressiveness on corporate philanthropy. If moral cleansing is the leading explanation for my results, I expect to see the positive relation between corporate philanthropy and executive-level personal tax aggression being moderated by corporate culture/norm. Under the moral cleansing hypothesis, misbehavior is defined as a behavior violating either an individual's internalized norm or widely accepted social norm. Thus, the presence of multiple executives within the same firm engaging in suspect exercises (a proxy for corporate culture/norm) should decrease each executive's moral burden from misbehaving. On the other hand, if managers' individual beliefs with respect to the tax system's lack of efficiency in distributing resources are the driver of my results, then I expect the opposite effect of corporate culture/norm on my results. The psychology literature on social norms suggests that individuals tend to behave in a manner similar to others around them (Asch and Guetzkow 1951). Hence, the positive relation between corporate philanthropy and executive-level personal tax aggression would only strengthen as the number of executives behaving in a similar manner with respect to their personal taxes within the same firm increases.

I find that the positive association between corporate philanthropy and executive-level personal tax aggression is consistent with the moral cleansing explanation. Specifically, corporate philanthropy increases by 9.4 percent on average after suspect exercise events in firms where top management is more likely to have a norm for equity in tax payments (i.e., when just one of the top executives in the data are initiating suspect exercise(s)). A 9.4 percent increase in

corporate philanthropy corresponds to $68,620 increase in cash outlays. In relation to my estimates of average personal tax gains from suspect exercises, every dollar of tax gain by a personally tax aggressive executive is associated with $6.30 of corporate philanthropy. For firms with top management that is less likely to have a norm for equity in tax payments, I fail to find the statistically significant positive relation between executive-level personal tax aggressiveness and corporate philanthropy. These results suggest that social norms play an important role in shaping whether a behavior can give rise to disutility and that the hypothesized cleansing behavior should only manifest in a setting where an executive experiences disutility from violating the existing social norm.

I perform two additional tests to examine the heterogeneity in the effect of executive-level personal tax aggressiveness on corporate philanthropy. First, I examine whether corporate governance, proxied by the fraction of shares owned by institutional blockholders, moderates the main findings. I find that greater ownership by institutional blockholders reduces the effect of executive-level personal tax aggressiveness on corporate philanthropy, suggesting that greater external monitoring limits corporate philanthropy that likely only satisfies corporate executives' demand/taste.

Second, I examine the moderating role of industry-level competition. I find that the positive relation between corporate philanthropy and executive-level personal tax aggressiveness is increasing in industry-level competition (proxied by Herfindahl-Hirschman Index (HHI)). This result suggests that the philanthropic activities of firms operating in highly competitive environments are used as a cleansing mechanism for suspect executives. Since corporate philanthropy may be seen as an advertising tool to increase customer loyalty (Navarro 1988) and advertising is a method to help differentiate products, increase product demand, and ultimately

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enhance barriers to entry (Sutton 1991), the presence of greater competition may help suspect executives to "justify" the increase in corporate philanthropy as a positive NPV investment. These additional tests, along with my main results, are robust to controlling for corporate-level financial misbehavior, corporate-level tax avoidance, market-to-book, and unobservable time-varying industry level factors that are found to be (or may be) correlated with both executive-level personal tax aggressiveness and corporate philanthropy.

Finally, I test whether firms that are exposed to suspect exercises not only increase the amount of corporate philanthropy (i.e., the size of grants) but also the number of grants that they make in the years following suspect exercises. The purpose of this test is to check whether the positive association between corporate philanthropy and executive-level personal tax aggression could partly be explained by the firms' effort to manage their corporate reputation with philanthropic activities in anticipation of or in response to the discovery of option exercise backdating by either the regulators (e.g., Internal Revenue Service (IRS) and Securities and Exchange Commission (SEC)) or media outlets. Option backdating scandals were highly publicized in the late 2000s, and, subsequently, backdating option exercises have come under greater scrutiny by the regulators. Under the assumption that corporate reputation management could be carried out through new and potentially highly publicized grants, examining whether my results are driven by the new grants would be informative in understanding whether there is a reputation management motive in corporate philanthropy. In my empirical tests, I fail to find a statistically significant new grant responses to suspect exercises. Overall, my findings collectively support the presence of moral cleansing for corporate executives who misbehave to make personal tax gains.

This study makes several contributions. First, it extends prior research investigating whether executives' personal attributes and behaviors influence corporate policies. Some studies find that manager fixed effects provide explanatory power for corporate acquisition decisions, dividend policy, and tax avoidance (Bertrand and Schoar 2003; Dyreng, Hanlon, and Maydew 2010). Others identify specific characteristics and behaviors of executives (such as overconfidence, military background, execution skills, personal leverage, and personal tax evasion) that are associated with corporate investment and financing policies, value, misconduct, and tax avoidance (Joulfaian 2000; Malmendier and Tate 2005; Bernile and Jarrell 2009; Malmendier et al. 2011; Kaplan, Klebanov, and Sorensen 2012; Chyz 2013; Biggerstaff et al. 2015; Law and Mills 2017). While studies on executive behavior document that individuals behave consistently across different decision-making settings (e.g., unethical behavior at personal level and financial misconduct of firms that misbehaving individuals manage), my study provides new insight that individuals can exhibit behavioral inconsistency (e.g., unethical behavior at personal level and prosocial behavior at corporate level). Second, my study contributes to a stream of research that views CSR programs as the manifestation of agency problems between managers and shareholders. That is, corporate philanthropy serves to promote managers' personal reputations and preferences at the expense of shareholders (Brown, Helland, and Smith 2006; Masulis and Reza 2015; Cheng, Hong, and Shue 2016). For example, Masulis and Reza (2015) offer evidence that CEO charity preferences (i.e., CEO's personal affiliation with the grant-receiving nonprofit organization) are positively associated with corporate philanthropy. Other than Masulis and Reza (2015), existing empirical work omits the role that executives' personal attributes and/or behavior play in explaining corporate philanthropy. The empirical results and the behavioral explanation put forth in this study are novel to the literature.

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The evidence that executives use corporate resources to account for their misbehavior supports the agency view of CSR activities.

CHAPTER 2: BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1 CORPORATE PHILANTHROPY

Corporate philanthropy is a prosocial behavior that supports the welfare of others.[8] Although philanthropy arises in many different forms, including cash donations, in-kind gifts (e.g., land, equipment, products, facilities, etc.), and volunteer services, data from the Foundation Center suggest that nearly all (99.9 percent) corporate donations to philanthropic activities in 2016 were in either cash or in-kind donations. This percentage has not fluctuated much since 2003 (the first year for which the Foundation Center's data is available online).

Corporations often support philanthropic activities through one of two potential channels: (1) corporate-sponsored foundations, and (2) corporate giving programs. In the first channel, corporations contribute cash, goods, and/or services to their own sponsored foundations, which then donate the contributed resources to external recipients. In the second channel, corporations contribute resources directly to recipients. Thus, the main difference between the two channels is that corporate-sponsored foundations involve a separate legal entity, while corporate giving programs are generally in-house functions. Nevertheless, data from the Foundation Center suggests that 98.5 percent of corporate donations in 2016 were from corporate-sponsored foundations (i.e., the first channel).[9] Figure 1 illustrates the two channels linking corporations to external recipients.

While some critics argue that "the social responsibility of business is to increase its profit" (Friedman 1970), prior research considers three different reasons for corporate

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[8] See "What is Corporate Philanthropy," Double the Donation, https://doublethedonation.com/tips/corporatephilanthropy.
[9] For more statistics on both the form and channel of corporate philanthropy, see "Foundation Data," FOUNDATION CENTER, https://foundationcenter.org/gain-knowledge/foundation-data.

philanthropic activities. The first reason, referred to as "doing well by doing good," views corporate philanthropy as a shareholder value maximizing activity (Navarro 1988; Benabou and Tirole 2010). For example, firms may use philanthropic activities to generate goodwill and build a loyal customer base. The second reason is called "delegated philanthropy" (Benabou and Tirole 2010). With this view, consumers and shareholders face information and transaction costs with directing their individual resources to charitable organizations; thus, they delegate their own philanthropic support and activities to the corporation. The third reason regards corporate philanthropy as the manifestation of an agency problem between a firm's management and its shareholders. That is, corporate philanthropy potentially serves to promote managers' personal reputations and preferences at the expense of shareholders (Boatsman and Gupta 1996; Brown et al. 2006; Masulis and Reza 2015; Cheng et al. 2016). Much of prior research focuses on this agency view of corporate philanthropy.

For instance, regarding whether managers, in general, have much influence over corporate philanthropy, prior studies find that executives exercise rather significant influence on the size and the selection of beneficiary of donations from both corporate-sponsored foundations and corporate giving programs (Harris and Klepper 1976; Kahn 1996; Masulis and Reza 2015). Even when corporate executives are absent on the governing board, executives still influence the philanthropic activities of their corporate-sponsored foundations (Werbel and Carter 2002). Focusing on specific manager-level factors, prior research also shows that managers' materialism (i.e., tendency to own luxury goods, such as expensive cars and boats) and insider-ownership are associated with CSR, which is generally viewed to encompass corporate philanthropy and other behaviors that enhance social objectives (Benabou and Tirole 2010). I contribute to the literature

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on corporate philanthropy by introducing novel, plausible explanations for the potential relation between corporate philanthropy and executive-level personal tax aggressiveness.

2.2 PERSONAL TAX AGGRESSIVENESS

Tax avoidance refers to the reduction of explicit taxes (i.e., taxes paid to tax authorities) (Scholes, Wolfson, Erickson, Hanlon, Maydew, and Shevlin 2014). As a result, it represents a continuum of tax planning strategies, where relatively benign strategies lie at one end and aggressive or even illegal strategies lie at the opposing end (Lisowsky et al. 2013). When tax planning strategies are chosen from a set of legally permitted alternatives after weighing tax and non-tax factors, tax avoidance is not likely to be controversial. However, controversy can arise when tax planning strategies are aggressive, which is defined as having "weak legal support" (Lisowsky et al. 2013, 590) that "push the envelope of tax law" (Hanlon and Heitzman 2010, 137; Donohoe 2015).

Tax aggressiveness, among corporations and individuals, is a topic of interest to the public, government, and academics. The interest is generally based on the idea that it "affects both the resource cost of raising taxes and the distribution of the tax burden—the bread-and-butter concerns of public economics" (Slemrod 2018). In other words, even if not outright illegal, tax aggressiveness directly erodes federal revenue, which relies on corporate and individual tax payments.[10] Thus, limiting aggressive tax planning "technologies" can reduce the amount of government resources allocated for tax compliance programs, help restore the public's

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[10] See "What are the sources of revenue for the federal government?," The Tax Policy Center, https://www.taxpolicycenter.org/briefing-book/what-are-sources-revenue-federal-government.

perception of tax inequity, and generate tax revenue to fund government programs, such as those focused on health care and education (Slemrod 2018).[11]

While some level of tax aggressiveness may be acceptable to an individual who has idiosyncratic expectation/belief about the probability of detection from the taxing authority or about the efficiency of the tax system, tax aggressiveness can also violate social norms. In an environment where the public desires both horizontal equity (i.e., individuals with similar wage and assets pay similar amount of taxes) and vertical equity (i.e., individuals in different locations of the income/wealth distribution pay different amount of taxes) in taxation, tax aggressiveness falls short of public desire by shifting the burden of financing government revenue to those who are not aggressive with their tax planning strategies. In prior literature, such public desire for tax equity is referred to as "tax morale," or social norm for tax equity. Prior studies examine both the presence and effect of social norm for tax equity (Davis, Hecht, and Perkins 2003; Luttmer and Singhal 2014; DeBacker, Heim, and Tran 2015; Dwenger, Kleven, Rasul, and Rincke 2016). For example, recent work by Dwenger and Treber (2018) show that public shaming of outstanding tax debt help reduce underpayment of taxes, suggesting that underpayment is associated with the violation of a social norm. My study contributes to the literature on individual-level tax sheltering behavior by examining where some of the sheltered tax dollars flow to and by providing an explanation that is likely to be most descriptive of the analyses carried out below.

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[11] Existing studies on tax enforcement look at the effectiveness of different enforcement mechanisms and map out the variation in tax aggressiveness for the distribution of global household wealth (Slemrod, Blumenthal, and Christian 2001; Kleven, Knudsen, Kreiner, Pedersen, and Saez 2011; Alstadsæter, Johannesen, and Zucman 2018; Bergolo, Ceni, Cruces, Giaccobasso, and Perez-Truglia 2018). These studies help both policy makers and academics in better understanding which enforcement tools targeted at which cross-section of households provide the most "bang for an enforcement spending."

2.3 HYPOTHESIS DEVELOPMENT

2.3.1 MORAL CLEANSING

Psychology and behavioral economics research suggest that there is a disutility associated with violating social norms, and that norm-violating individuals engage in "cleansing" activities to offset the disutility. According to Akerlof and Kranton (2000) and Baumeister et al. (1994), a norm is a prescribed behavior that individuals within a particular social context "should" follow. As a result, deviations from the prescribed behavior are often referred to as "misbehaving." Because misbehaving damages one's moral self-image and/or creates disutility, individuals often engage in compensatory behaviors to restore their moral self-image and to offset their disutility (West and Zhong 2015; Gneezy et al. 2014). These compensatory behaviors are called "moral cleansing" in psychology and "conscience accounting" in behavioral economics (Tetlock, Kristel, Elson, Green, and Lerner 2000; Zhong and Liljenquist 2006; Merritt, Effron, and Monin 2010).

I consider whether the pursuit of corporate philanthropy is a compensatory behavioral response to corporate executives' personal tax aggression. The act of restoring moral self-worth and offsetting disutility of tax aggression by pursuing corporate philanthropy assumes that there exists either an internalized norm, social norm, or both for tax equity. If personal tax aggressiveness does not violate a corporate executive's internalized norm or if there is no social norm for tax equity in the corporate executive's environment, then I would expect the moral cleansing effect to be less salient. As a result, the notion of moral cleansing suggests a positive relation between corporate philanthropy and executive-level personal tax aggressiveness when either an internalized norm, social norm, or both for tax equity exists in the executive's environment.

2.3.2 INDIVIDUAL BELIEFS

A growing literature in behavioral economics, finance, and accounting leverage psychology theories to examine how managerial beliefs or preferences affect corporate decisions (Joulfaian 2000; Chyz 2013; Cronqvist et al. 2012; Law and Mills 2017; Malmendier 2018). For example, in a merger and acquisition setting, an executive in charge of the bidding process could overestimate her ability to generate value from the transaction and, subsequently, overbid for a target (Roll 1986). In a similar manner, executives could have preferences for tax aggressiveness both at the individual level and corporate level giving rise to a positive association between executive-level personal tax aggression and corporate tax aggression (Joulfaian 2000; Chyz 2013). I propose that the executives' preferences for tax aggression are at least partly due to their beliefs about the government's ability to efficiently distribute resources gathered through its tax system. Informative about how individuals' view government expenditures, Li, Eckel, Grossman, and Brown (2015), in a lab experiment, find that participants voluntarily contributed more resources to the government when they were presented with information that their contributions will be directed toward government programs that support specific causes than when they were presented with information that their contributions will, in general, increase the U.S. federal revenue. Executives could view the lack of efficiency of the tax system (e.g., distortion of incentives; loss of transfers from the administrative costs of taxation; misdirected resources) as one of the rationale for deploying aggressive tax planning technologies and could decide to directly inject resources into social programs that fund healthcare and education.

2.3.3 HYPOTHESIS

Both moral cleansing and individual beliefs explanations predict that corporate philanthropy is increasing in executive-level personal tax aggression. However, there two key reasons why such a positive relation might not manifest. With respect to the moral cleansing explanation, personally tax aggressive executives can have other means through which they restore their moral self-worth and rid themselves of disutility. For example, Card, Hallock, and Moretti (2010) find that corporate headquarters location is positively associated with local charitable giving, which they attribute to corporate executives making personal donations to local charities. If personally tax aggressive executives compensate for their tax-based misbehavior solely through personal donations, then corporate philanthropy might not be sensitive to executives' personal tax aggressiveness. With respect to the individual beliefs explanation, executives could simply be limited in their ability to impose their idiosyncratic belief on corporate-level decisions. This would be the case if corporate governance system surrounding the executives views corporate philanthropy primarily as a conduit for promoting executives' personal reputations and preferences at the expense of shareholders. Nevertheless, on balance, I test the following hypothesis (in alternative form):

H_1: There is an increase in corporate philanthropy after an executive is personally tax aggressive.

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CHAPTER 3: RESEARCH DESIGN AND DATA

3.1 MEASURING PERSONAL TAX AGGRESSIVNESS

3.1.1 STOCK OPTION EXERCISE BACKDATING

Tests of H_1 require the timely measurement of personal tax aggressiveness. Even if it were possible to obtain confidential IRS data on individual-level tax audits for corporate executives, such data may not prove fruitful. For instance, IRS audits generally transpire for several years and, generally speaking, there could be a long (or no) statute of limitations for particularly aggressive tax planning transactions. Therefore, the discovery of individual tax aggressiveness (through tax audits) may substantially lag the tax year of a personal tax aggression event, rendering only a few observable data points. I overcome such empirical challenges by relying on a measure of personal tax aggressiveness established and validated by recent research (Cicero 2009; Dhaliwal et al. 2009; Chyz 2013; Biggerstaff et al. 2015).

A number of studies find that corporate executives backdate option exercises to make personal tax gains (Cicero 2009; Dhaliwal et al. 2009). Such so-called "stock option backdating" involves marking an option exercise transaction *as if* it were exercised on a date that *precedes* the actual exercise date. The economics of such tax-motivated option exercises are simple. Executives face immediate tax consequences when they exercise options. The spread between the exercise price and underlying stock price at the exercise date is taxed at ordinary income tax rates. Subsequently, any price appreciation of the underlying stock beginning on the exercise date (i.e., the date of acquisition of the underlying stocks) can be taxed at long-term capital gains tax rates—which is significantly lower—provided that the underlying stocks are held long enough (e.g., more than one year) to qualify. Since the long-term capital gains tax rate is lower

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than the ordinary income tax rate, executives have an incentive to reduce their tax burden by shifting the spread between the exercise price and underlying stock price into long-term capital gains.[12]

Reducing explicit taxes through option exercise backdating is achievable when executives (1) date their option exercises to days associated with low stock prices, and (2) hold the underlying assets until capital gains are classified as long-term (also known as, "exercise-and-hold" transactions). The SEC requires corporate insiders to report the date of option exercise transactions, and this reporting requirement allows researchers to observe whether stock return and exercise date price patterns are consistent with executives attempting to make personal tax gains. If executives actively date their option exercises to days with low stock prices, researchers should observe the prices of underlying stocks decreasing pre-exercise dates and increasing post-exercise dates. Figure 2 plots both cumulative total and abnormal returns in a [-30, +30] day window around exercise-and-hold transactions over this study's sample period (i.e., 2003-2016). The cumulative return patterns in Figure 2 are consistent with executives backdating option exercises to make personal tax gains.[13]

What are the legal implications of option exercise backdating and why is this behavior an aggressive tax avoidance strategy? As discussed in Fried (2008), Cicero (2009), and Dhaliwal et al. (2009), backdating option exercises to save personal taxes results in under-reporting of tax liability and, in some cases, can be considered a felony under Federal law (see IRC Sections 7201, 7206, and 7207). Given the potential legal consequences of using option exercise

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[12] The top marginal income tax rate for individuals fluctuated over the recent years. For example, from 2003 to 2012 the top marginal tax rate was 35.0 percent. From 2013 to 2017, the top marginal tax rate was 39.6 percent. The top statutory tax rate on long-term capital gains was 15.0 percent starting in 2003, and this rate jumped to 20.0 percent starting in 2013.
[13] As discussed in Cicero (2009), if these exercise-and-hold transactions are timed with private information (not backdated) by the corporate insiders, the negative returns preceding exercise date should not necessarily be observable.

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backdating to make personal tax gains and the fact that such personal tax avoidance pushes the envelope of the tax law, prior research views option exercise backdating as an aggressive personal tax avoidance strategy (Chyz 2013, 311). Anecdotally, a former CFO of Mercury Interactive Corp. was indicted in 2008 for charges related to income tax evasion and on aiding income tax evasion of other executives at Mercury Interactive Corp. An SEC, IRS, and shareholder-led investigation accused the CFO of evading income taxes via option exercise backdating, and the CFO was sentenced in 2011 to four months incarceration and ordered to pay $400,000 in restitution.[14]

3.1.2 DATA ON OPTION EXERCISES

Corporate insiders, such as officers and directors, with access to non-public, material information must report their insider trading activities to the SEC on Forms 3, 4, 5, and 144. Thomson Financial Insider Filing Database (IFD) is a machine-readable dataset that contains the reported insider trading activities. I focus on insider trading activities of Board Chairman, Chief Executive Officer (CEO), Chief Operating Officer (COO), Chief Financial Officer (CFO), and President for the sample period beginning in fiscal year 2003 and ending in fiscal year 2016.[15] I focus on these executives based on evidence that top management has influence in directing corporate philanthropy (Harris and Klepper 1976) and that some of these executives' option exercises are likely backdated (Cicero 2009; Dhaliwal et al. 2009; Chyz 2013). At the transaction level, I follow Cicero (2009) and consider exercises by all executives within a firm on the same date as a single transaction. Following Chyz (2013) and Biggerstaff et al. (2015), I then

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[14] See "Ex-Mercury CFO Gets 4 Months For Tax Evasion," Law360, https://www.law360.com/articles/229277/exmercury-cfo-gets-4-months-for-tax-evasion.
[15] The sample period is restricted by the availability of FDO's information on philanthropic activities by corporate-sponsored foundations and corporate giving programs.

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aggregate option exercise transactions at the firm-year level. Thus, I count all of the exercise transactions by executives within a firm-year as a single observation.

As discussed in Chapter 3.1.1, option exercises that exhibit stock return patterns consistent with backdating the exercises to make personal tax gains (suspect exercises) fall under the exercise-and-hold transaction category. Thus, exercise-and-hold transactions are composed of "suspect" exercises and "non-suspect" exercises. To control for any common factor that drives executives to exercise their options and not immediately sell the underlying shares, I limit my sample to exercise-and-hold transactions.

I identify exercise-and-hold transactions by merging option transactions data (Table 2 of Form 4) with stock transactions data (Table 1 of Form 4). For both options and stocks, I follow Bebchuk, Grinstein, and Peyer (2010) and focus on transactions that have the following cleanse codes: "R" ("Data verified through the cleansing process"), "H" ("Cleansed with a very high level of confidence), and "C" ("A record added to non-derivative table or derivative table in order to correspond with a record on the opposing table"). A cleanse code is assigned to each insider filing observation by Thomson Reuters to indicate their confidence in data integrity. For each option exercise transaction coded "M", "X", and "J", I look for stock sales by the same executive during the [-3, +3] day window around the exercise date.[16] I classify option exercises that are *not* accompanied with stock sales during the [-3, +3] day window as exercise-and-hold transactions. This classification scheme is consistent with prior literature (e.g., Biggerstaff et al. 2015). The rationale for using a relatively tight window for stock sales is to capture executives' intention to *hold* the acquired shares at the exercise date. I eliminate two exercise-and-hold

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[16] Transaction codes "M", "X", and "J" stand for "Exercise of in-the-money or at-the-money derivative security acquired pursuant to Rule 16b-3 plan", "Exercise of in-the-money or at-the-money derivative security", and "Other acquisition or disposition", respectively.

transactions from the sample: (1) missing stock price information during the calendar month of option exercise, and (2) those outside of fiscal years from 2003 to 2016. Applying the above data filters, the sample consists of 934 unique firms and 1,696 firm-year observations.

3.2 MEASURING CORPORATE PHILANTHROPY

For the 934 unique firms identified above, I obtain data on the philanthropic activities of their corporate-sponsored foundations and corporate giving programs from the Foundation Center. The Center's mission is to gather grant-level information to promote efficient allocation of philanthropic resources. The Center's information on corporate philanthropy is accessible through their online directory (referred to as FDO) for 2003-2016. As noted earlier, corporate philanthropy can transpire in different forms such as cash donations, in-kind gifts, and volunteer services. From 2003-2016, 99.9 percent of total grants (i.e., resources given by corporate-sponsored foundation or corporate giving programs) are either cash or in-kind grants. The Foundation Center provides detailed information about grant-makers and their grants, including the identity of grant-maker, grant amount, the identity of grant-recipient, and the grant year. It obtains these details by (1) directly asking the grant-making corporations for the philanthropic activities of their giving programs, and (2) accessing public records, such as the IRS filings (e.g., Form 990-PF), for the philanthropic activities of corporate-sponsored foundations. To the best of my knowledge, FDO is the most comprehensive database for identifying corporate philanthropy.

However, FDO does not provide a unique company identifier that can be reliably used to match corporate philanthropy to IFD or Compustat; thus, I hand-match the corporate philanthropy information on FDO to 934 firms using the Employer Identification Number (EIN) and company name. Figure 3 presents the level of aggregate corporate philanthropy from 2003 to

2016 for the sample. Corporate philanthropy (in dollars) is generally trending up, with a large spike in 2013. One explanation for the spike in corporate philanthropy is the Boston Marathon bombings on April 15th. Later, I address the potential concern that the results documented below could be driven by this abrupt change.

3.3 EMPIRCAL MODEL

I examine the effect of corporate executives' personal tax aggressiveness on corporate philanthropy using a difference-in-differences methodology, where I compare changes in philanthropic activities of firms exposed vs. not-exposed to suspect option exercise events. A firm is exposed to a suspect exercise event if the firm's executive(s) initiates one or more suspect exercises that exhibit stock return patterns around the exercises consistent with using option exercise backdating to make personal tax gains. A firm is in the non-exposed group if its executive(s) initiates one or more non-suspect exercises in the same year. The exposed and non-exposed firms within the same year are then grouped into a single event cohort (e.g., 2013-cohort). For each firm in the same event-cohort, I build a firm-level panel data spanning three years before and three years after the event. Finally, I "stack" each event cohort into a dataset. Using this "stacked" approach, I estimate regressions of the following type throughout my analyses:[17]

$$y_{iet} = \beta(Exposed_{iet} \times Post_{iet}) + \delta X_{iet} + \gamma_{ie} + \omega_{te} + \varepsilon_{iet,} \tag{1}$$

where i, e, and t index firms, event, and year, respectively. Y is the natural log of (1+corporate philanthropy). *Exposed* is an indicator variable that equals 1 if at least one of a firm's executives are reported to have initiated suspect exercises on days associated with stock prices in the bottom

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[17] See Gormley and Matsa (2011) and Fos and Tsoutsoura (2014) for similar stacked empirical design.

quintile of the calendar month. *Post* is an indicator variable that equals 1 for three years after the option exercise event. *X* are firm-level control variables. I include firm×event-cohort fixed effects, γ_{ie}, to control for fixed firm heterogeneity within a event-cohort. Year×event-cohort fixed effects, ω_{te}, control for any time varying aggregate-level shocks within a event-cohort. The two fixed effects in Equation 1 absorb both *Exposed* and *Post* variables' variation. E_{iet} is the error term. Standard errors are clustered at the firm level.

Figure 4 shows that my exposed vs. non-exposed assignment scheme separates firms exposed to suspect exercise events from those not exposed to suspect exercise events. The figure plots cumulative total returns for both exposed and non-exposed groups. The dotted line represents cross-sectional average cumulative total returns for the exposed firms, and the solid line represents cross-sectional average cumulative total returns for the non-exposed firms. The sharp distinction between cumulative total return patterns for exposed and non-exposed firms suggests that executives in exposed firms tend to initiate suspect exercises while executives in non-exposed firms, on average, initiate non-suspect exercises.[18]

To illustrate my empirical design, consider the following example. Suppose an executive at Fake Co. initiates a suspect exercise in 2010. To examine whether Fake Co.'s philanthropic activities are sensitive to this executive-level tax aggression, I could compare the level of Fake Co.'s philanthropic activities before and after 2010. If there are no concerns with respect to aggregate-level shocks affecting Fake Co.'s philanthropy around the same time period, the simple time-series difference approach would be sufficient to establish an empirical link between

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[18] Relaxing my exposure assignment scheme to include more firms in the exposed group (assigning 1 to exposed if at least one of a firm's executives is reported to have initiated suspect exercises on days associated with stock prices in the bottom tercile of the calendar month) does not alter my inferences. Also, restricting my exposure assignment scheme to include less firms in the exposed group (assigning 1 to exposed if at least one of a firm's executives is reported to have initiated suspect exercises on days associated with stock prices in the bottom decile of the calendar month) does not alter my inferences.

corporate philanthropy and executive-level tax aggressiveness. However, it is possible that other events could have driven up the demand for corporate philanthropy in 2010. For example, an earthquake in Haiti transpired in 2010. To difference out such aggregate-level shocks, I include other firms with their executives initiating non-suspect exercises in 2010. With the control group in place, I examine the difference between the change in Fake Co.'s philanthropic activities and the change in control groups' philanthropic activities around 2010. Since my empirical design accommodates multiple suspect exercise events by suspect executives, Equation 1 estimates the average effect of executive-level tax aggression on corporate philanthropy for all suspect exercise events across different firms and years. It is important to note that executives of both exposed and non-exposed firms are exercising their stock options in year t; therefore, any common incentive that drives executives to exercise options and hold the underlying securities in the same year is controlled for in the empirical design.

I control for firm-year variables that might either affect corporate philanthropy or be correlated with both executive-level tax aggressiveness and corporate philanthropy. Navarro (1988) argues that corporate managers use corporate philanthropy strategically to improve corporate image and finds a positive correlation between advertising expenditures and corporate philanthropy. I include advertising expenditures as a control variable. Profitability (return on assets) and size-based measures (total assets and market-to-book variables) also likely influence corporate philanthropy. List (2011) provides some descriptive evidence consistent with the notion that philanthropy is procyclical.[19] Also, I include leverage and cash holdings as proxies for free cash flow induced agency problems. Weak governance could allow executives to (1) take advantage of weak internal information environments to make personal tax gains, and (2)

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[19] Using market value as an alternative size-based control variable does not alter the documented results.

expend corporate resources on their rent-seeking projects, such as corporate philanthropy, to improve their own image. I control for the cash effective tax rate, such that my results are not driven by suspect executives using cash donations from corporate giving programs as a strategy to reduce corporate tax payments (Joulfaian 2000; Chyz 2013).

In light of Chyz's (2013) findings on the positive relation between corporate tax aggressiveness and the presence of suspect executives, one could argue that corporate philanthropy is a mechanism through which personally tax aggressive executives achieve lower corporate tax payments. There is at least one reason why corporate philanthropy is not likely a corporate tax avoidance strategy pursued by personally tax aggressive executives. While U.S. corporations can deduct philanthropic donations on their tax returns and reduce tax payments, these philanthropic donation must originate from corporate giving programs (corporate in-house function) in order for the corporations to use their philanthropic activities to generate additional deductions.[20] The Foundation Center's data shows that the majority of corporate philanthropic activities are composed of those originating from corporate-sponsored foundations not from corporate giving programs.[21]

Given that corporate-sponsored foundations are separate legal entities under the Internal Revenue Code (IRC), it is unlikely that the predicted positive relation between corporate philanthropy and executive-level personal tax aggression is a mechanism for the findings in Chyz (2013). Despite the above reasoning, I control for the cash effective tax rate (ETR). Finally, I control for the incidence of Accounting and Auditing Enforcement Releases (AAERs).

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[20] U.S. corporations can deduct philanthropic donations on their tax returns, reducing tax payments. In addition, corporate philanthropy reduces the bottom line on financial income statements. For more information on the effect of corporate philanthropy on corporate tax returns, see IRS Publication 542, https://www.irs.gov/publications/p542.
[21] According to the FDO, 1,225,556 out of 1,244,535 philanthropic donations were from corporate-sponsored foundations in 2016.

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Biggerstaff et al. (2015) document a positive relation between unethical behavior at executive-level (e.g., executive-level tax aggression) and financial misconduct at firm-level (e.g., financial restatements). Chakravarthy, DeHaan, and Rajgopal (2014) show that firms pursue prosocial activities (e.g., corporate philanthropy) as a way of repairing their reputation in the post-financial restatement periods. Controlling for AAERs (proxy for financial misconduct at firm-level) mitigates the concern related to the corporate-level "reputation-rebuilding" effect driving my results.

3.4 OTHER DATA SOURCES AND DATA FILTERS

I obtain firm-level data on advertising expense, sales, total assets, profitability, leverage, market value, cash holdings, cash effective tax rate, and HHI from Compustat. These variables are used to construct the control variables in Equation 1. Both year and industry classifications follow fiscal year and SIC code reported in Compustat. AAERs are obtained from the University of Southern California's Marshall School of business.[22] Institutional block ownership is obtained from WRDS Thomson Reuters Institutional (13f) Holdings file. I also obtain daily stock prices and returns from CRSP to (1) observe monthly stock price range (used to produce summary statistics below) and (2) construct cumulative total and market-adjusted returns.[23]

The control variables are matched to the panel data spanning three years before and three years after 1,696 firm-year observations (i.e., firm-years with exercise-and-hold transactions). I eliminate those observations with missing control variables. Having 934 unique firms with 1,696 firm-years associated with exercise-and-hold transactions indicates that some firms might be a non-exposed firm in one event-cohort and an exposed firm in another event-cohort. If a firm

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[22] See https://www.marshall.usc.edu/departments/leventhal-school-accounting/faculty/aaer-dataset.
[23] Both cumulative total and market-adjusted returns calculations follow Kothari and Warner (2007).

experiences a non-suspect exercise event in year *t* and a suspect exercise event in year *t+1*, the firm's non-exposed observations partially overlap with the same firm's exposed observations. To ensure that a firm's non-exposed observations are not contaminated by the same firm's exposed observations, I eliminate post-option-exercise event observations whenever there is such an overlap. Applying the above data filters, my final exercise-and-hold sample at the firm-year level consists of 1,350 observations. The analysis sample, which I build by obtaining firm-year observations for the three years before and after the exercise-and-hold transactions, consists of 7,750 observations.

3.5 SUMMARY STATISTICS

Panel A of Table 1 provides summary statistics for executives' 1,679 exercise-and-hold transactions and 1,350 observations aggregated at the firm-year level. For the calendar month in which exercise-and-hold transaction occurs, I calculate daily price deviation from the transaction date stock price (i.e., daily stock price – transaction date stock price). I then calculate the summary statistics for each exercise-and-hold transaction and obtain cross-sectional averages for 1,679 exercise-and-hold transactions. The average price deviation is $0.19, and the standard deviation of those price deviations is $1.13. These descriptive statistics provide information on the average range of prices that an executive is likely to choose from for initiating suspect exercises. Of 1,679 transaction-level observations, 768 are classified as suspect exercises and 911 are classified as non-suspect exercises.

Aggregated at the firm-year level, there are 491 firm-years exposed to at least one executive initiating at least one suspect exercise while 859 firm-years are not exposed. The summary statistics for firm-year observations are pooled averages. The average amount of

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corporate philanthropy is $0.57 million. While $0.57 million may seem immaterial when compared to the average size of the firms in my sample, it is a relatively large number compared to the average size of the philanthropic grants in 2016. Specifically, the average size of the philanthropic grants was between $21,300 to $21,700 from foundations with assets of more than $10 million.[24] The natural log of total assets, on average, is 6.62 which corresponds to approximately $749.95 million. The mean firm-year has leverage, market-to-book, and cash holdings of 17 percent, 187 percent, and 20 percent of total assets, respectively. The average cash effective tax rate (Cash ETR) is 21 percent, and the median is 20 percent. These Cash ETR summary statistics are considerably lower than those reported in prior research. For example, Dyreng, Hanlon, Maydew, and Thornock (2017) examine the evolution of effective tax rate measures from 1988 to 2012 and report 29.1 percent for the mean and 27.5 percent the median Cash ETR measure. Just 1 percent of the firm-years are issued AAERs.

Panel B of Table 1 presents summary statistics for both exposed and non-exposed groups and reports the results of univariate t-tests comparing the mean of the control variables. Many of the firm-year characteristics are similar across both exposed and non-exposed groups. The only difference is the Cash ETR variable. The exposed firms have slightly lower Cash ETR than that of the non-exposed firms, and this difference is statistically significant. The economic significance of the difference is approximately 0.02 percent. This Cash ETR difference is approximately 10 percent of the average Cash ETR in the firm-year sample ($(0.02/0.21)\times100 = 9.52$). I include Cash ETR in Equation 1 as a covariate to control for the difference in Cash ETR from potentially affecting my results.

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[24] See "Average Grant Sizes Increased in 2016, Foundation Source Finds," PND by Candid, July 29, 2017, https://philanthropynewsdigest.org/news/average-grant-sizes-increased-in-2016-foundation-source-finds.

Table 2 shows the breakdown of 1,350 firm-year observations by two-digit SIC (SIC2) industry groups. SIC2 industry groups are ordered by the size of representation in the sample, and industry groups that do not make up a percent of the sample is left out of Table 2. Since the predictions of moral cleansing theory and the mechanics of suspect exercises and corporate philanthropy are applicable to all SIC2 industry groups, I include all industry groups in the sample. Depository institutions (SIC2: 60) make up 16.15 percent of the sample. Electronic equipment and components (SIC2: 36) and business services (SIC2: 73) industries make up the next chunk of the sample. It is not clear what is driving depository institutions to represent a sizable portion of the exercise-and-hold transactions from 2003 to 2016. Later in the robustness chapter, I rerun Equation 1 after dropping depository institutions from the sample to check that the results are not solely driven by depository institutions. I also check that my results are robust to unobservable time-varying industry level factors in the analyses presented below. Thus, if the concern is with depository-institution industry designation being correlated with an omitted variable, controlling for industry-year fixed effects should help mitigate the concern.

CHAPTER 4: EMPIRICAL RESULTS

4.1 HYPOTHESIS TEST

Figure 5 provides graphical/non-parametric evidence as to whether corporate philanthropy is increasing in executive-level personal tax aggression. To construct the graphical evidence, I create a binned scatter plot where I residualize the log of (1+corporate philanthropy) with firm×event-cohort indicators and plot the mean of this residual variable in each [-3, +3] window surrounding the option exercise/executive-level tax aggression events. Figure 5 shows a clear structural break in corporate philanthropy for firms that are exposed to suspect exercises, whereas corporate philanthropy for firms that are not exposed to suspect exercises remain flat over the event window. To corroborate this descriptive evidence and to control for potentially confounding factors, I estimate Equation 1.

Table 3 reports the results. Regression specifications in columns (1) and (2) include both firm×event-cohort and year×event-cohort fixed effects. This fixed effects structure controls for (1) time-invariant firm heterogeneity around option exercise event (i.e., three years before the event + the event year + three years after the event) and (2) aggregate-level shocks affecting all firm-year observations during the seven years surrounding an event-cohort. Column (1) shows results without the observable firm-year control variables. The coefficient on the difference-in-differences estimator in column (1) is 0.027 and statistically significant at the $p < 0.05$ level. Since the dependent variable in Table 3 is logged, the coefficients of interest can be interpreted as the semi-elasticity of corporate philanthropy with respect to suspect exercise event. In terms of economic significance, corporate philanthropy increases by a 2.7 percent on average after

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suspect exercise events, relative to control firms that are not exposed to suspect exercises in the same year.

In column (2), I investigate whether column (1)'s finding is robust to controlling for observable firm-year variables. The results in column (2) are qualitatively similar to those found in column (1). The economic significance remains virtually unchanged from column (1)'s finding. Overall, column (1)'s main finding is not sensitive to the inclusion of controls. Given that the control variables are well matched between the exposed and non-exposed groups in the years of exercise-and-hold transactions, the role of control variables in column (2)'s specification is not surprising.

In column (3) and (4), instead of year×event-cohort fixed effects I include industry×year×event-cohort fixed effects. This altered fixed effects structure identifies the positive association between corporate philanthropy and executive-level personal tax aggression within the same industry and year, differencing out unobserved time-varying industry-level shocks for each event-cohort. Intuitively, this methodology helps eliminate concerns related to time-varying cross-industry differences driving the results documented in columns (1) and (2). In column (3), the coefficient on the difference-in-differences estimator is 0.030 and statistically significant. Thus, the economic significance slightly improves under the altered fixed effects structure. Using the mean of corporate philanthropy variable for 7,750 firm-year observations (i.e., $0.73 million; untabulated), a 3.0 percent increase corresponds to $21,900 increase in corporate philanthropy. Comparing this dollar amount to the sample mean of firm size (i.e., $749.95 million) may seem to suggest that the economic significance of findings is immaterial. However, compared to the average size of the philanthropic grants (i.e., between $21,300 and

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$21,700) by foundations with assets of more than $10 million in 2016 as noted above, the dollar estimate (i.e., $21,900) is economically significant.

In column (4), I investigate the extensive margin response of corporate philanthropy and fail to document a statistically significant extensive margin effect of executive-level personal tax aggression. Overall, Table 3 documents the predicted positive association between corporate philanthropy and executive-level personal tax aggression under both moral cleansing and individual beliefs explanations and shows that the positive association is mainly driven by the increase in philanthropic activities by firms that had ongoing philanthropic practices.

4.2 TEST OF MORAL CLEANSING VERSUS INDIVIDUAL BELIEFS EXPLANATION

To investigate whether the results reported in Table 3 reflect moral cleansing or individual beliefs, I consider the heterogeneity in the effect of corporate executives' personal tax aggressiveness on corporate philanthropy. Specifically, I use the number of executives initiating suspect exercises at the same firm in the same year as a proxy for a firm-level social norm and test whether the effect of executive-level personal tax aggression on corporate philanthropy varies with the firm-level norm. The idea behind using a firm-level norm is as follows: Under moral cleansing, violating either an individual's internalized norm or widely accepted social norm (i.e., misbehaving) creates disutility. It is disutility that drives the hypothesized "cleansing" behavior: corporate philanthropy. Since an individual's disutility is tied to norms in her environment, the presence of multiple executives within the same firm engaging in suspect exercises should decrease each executive's moral burden from misbehaving. On the other hand, under individual beliefs firm-level norm could only have a different effect on the association between corporate philanthropy and executive-level personal tax aggression. Specifically, as the

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number of executives viewing tax payments as an inefficient way of funding for social objectives grows within in an organization, the positive relation between corporate philanthropy and executive-level personal tax aggression would only strengthen.

Parsons, Sulaeman, and Titman (2018) examine whether city-level norms are correlated with the financial misconduct of public firms located within/close to the city, and find that city-level norms are strongly, positively correlated with the financial misconduct of firms located in the area. Using a similar approach, I measure firm-level norm with the number of executives initiating suspect exercises at the same firm in the same year. This approach of measuring firm-level norm is based on prior literature's findings that provide evidence on how individuals tend to conform their behaviors to that of others around them (Asch and Guetzkow 1951; Turner 1991). I then estimate Equation 1 after sorting exposed firms into two categories: (1) exposed firms with one executive initiating suspect exercise(s) and (2) exposed firms with more than one executive initiating suspect exercise(s).

The results are reported in Table 4. Column (1) includes firm×event-cohort and year×event-cohort fixed effects, while column (2) includes firm×event-cohort and industry×year×event-cohort fixed effects to difference out unobserved time-varying industry-level shocks. In both columns, the coefficient of interest is on the *Exposed×Post×One Personally Tax Aggressive Executive* variable, and both coefficients are statistically significant at the $p<0.05$ level. Focusing on column (2)'s results, corporate philanthropy increases by a 9.4 percent on average after suspect exercise events for firms with a single executive initiating suspect exercise(s). A 9.4 percent increase corresponds to $68,620 increase in corporate philanthropy (using the mean of corporate philanthropy of $0.73 million). However, the difference-in-differences estimator is statistically insignificant when there are more than one

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personally tax aggressive executives. Overall, the findings documented in Table 4 suggest that the moral cleansing explanation is most descriptive of the results documented in Table 3. That is, executives that misbehave through personal tax aggressiveness increase their corporations' philanthropic activities to reduce the disutility of misbehaving.

4.3 CORPORATE PHILANTHROPY PER DOLLAR OF PERSONAL TAX GAIN

How much is spent to offset suspect executives' disutility? To answer this question, I estimate the average dollar value associated with suspect exercises following Cicero's (2009) estimation procedure. Specifically, I use all suspect exercises from 2003 to 2016 and calculate the payoff to each suspect exercise using the difference between Equations A and B:

$$A = S_1 - g(S_1 - S_{reported}) - K(1 + r) - \tau(S_{reported} - K)(1 + r),$$
$$B = S_1 - g(S_1 - S_{median}) - K(1 + r) - \tau(S_{median} - K)(1 + r),$$
(2)

where $S_{reported}$ is the closing stock price on the reported exercise date, and S_{median} is the median closing stock price during the calendar month the exercise-and-hold transaction reportedly took place. S_1 is the closing stock price a year later. G is the long-term capital gains tax rate, K is the strike price, r is the beginning-of-year prime rate provided by JPMorgan Chase & Co., and τ is the ordinary tax rate.[25] The following assumptions are made to estimate the dollar value associated with each suspect exercise: (1) exercised option's corresponding stocks are sold a year after the exercise date, (2) S_{median} represents what the closing stock price would have been if it were not for option exercise backdating, and (3) suspect exercise is financed with debt which is paid back with the proceeds from selling the corresponding shares. According to the above estimation, the average dollar value of suspect exercises from 2003 to 2016 (i.e., 704 option

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[25] For prime rate information, see "Historical Prime Rate," JPMorgan Chase & Co., https://www.jpmorganchase.com/corporate/About-JPMC/historical-prime-rate.htm.

exercises) is $10,893. Taking the average payoff to suspect exercises at face value and

extrapolating it to firm-year level, every $1 of personal tax gain by a suspect executive is

associated with $2.01 ($21,900/$10,893) of corporate resources spent on corporate philanthropy.

4.4 DYNAMIC EFFECT OF EXECUTIVE-LEVEL TAX AGGRESSION

Investigating the dynamic effect of personally tax aggressive executives is helpful for

alleviating at least two concerns: (1) whether the exposed and non-exposed groups' corporate

philanthropy share parallel trends, and (2) whether executive-level misbehaving through personal

tax aggressiveness is endogenous to either the planned level of corporate philanthropic activities

in the future or some other preexisting, unobservable shock that is correlated with both suspect

exercise event and corporate philanthropy. If either one of the concerns are present in the data, I

should find the effect of executive-level personal tax aggression on corporate philanthropy in the

pre-option exercise event years. Related to the first concern, the key assumption behind the

interpretation of my difference-in-differences estimator, β, is that corporate philanthropy for the

exposed and nonexposed groups would have exhibited parallel trends in the three years after

option exercises if it were not for the suspect exercises. I examine the plausibility of this

assumption by ensuring that both exposed and non-exposed groups' corporate philanthropy show

common trends in the years before the option exercise events. Since the second concern also

requires examining the relation between exposure status and corporate philanthropy in the pre-

option exercise event years, the investigation of parallel trends assumption is informative for the

second concern as well.

Columns (1) and (2) of Table 5 show the dynamic effect of executive-level personal tax

aggressiveness on corporate philanthropy. In both columns, I replace *Exposed×Post* dummy

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variable in Equation 1 with a set of interactions indicating the exposure status and a full set of time dummies around the option exercise events. Column (1) estimates the dynamic effect with firm×event-cohort and year×event-cohort fixed effects structure. Column (2) estimates the dynamic effect with firm×event-cohort and industry×year×event-cohort fixed effects structure. The results documented in columns (1) and (2) of Table 5 suggest that the pre-trends of corporate philanthropy for the exposed vs. non-exposed firms do not differ, alleviating the two concerns about the main results documented in Tables 3 and 4. While the effect of executives' personal tax aggressiveness on corporate philanthropy begins to appear in the year immediately after the option exercise events, the effect is both statistically and economically significant starting from the second year. The statistically muted effect in the first year could be due to either the mismatch in the accounting period (fiscal period) between corporations and their foundations, the time it takes for grant-making organizations (either corporate giving programs or corporate-sponsored foundations) to vet potential grant-receiving parties, or both.[26] While in-house corporate giving programs follow corporations' fiscal years, corporate-sponsored foundations could have their own accounting calendar (potentially lagging behind corporate fiscal-year end month) because these foundations are separate legal entities. Furthermore, both corporate giving programs and corporate-sponsored foundations may intend to increase their level of donations; however, the approval of and outlay of resources to grant-recipients may not transpire immediately following the intention.

The graphical evidence of the dynamic effect is presented in Figure 6. This figure shows the semi-elasticity of corporate philanthropy with respect to the exposure status over [-3, +3]

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[26] For information on how long the grant-making process could take for corporations and their foundations, see "How Long Does It Take to Get a Grant Proposal Approved?," https://www.thebalancesmb.com/time-for-grantproposal-approval-2502178.

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window surrounding the option exercise events. The graph shows convincing evidence that corporate philanthropy increases in the post-option exercise event years for firms exposed to executive-level personal tax aggression. Finally, Figure 6 shows that the moral cleansing effect levels off in the third year. This leveling-off phenomenon fits the prediction of the conscience accounting model in Gneezy et al. (2014). The conscience accounting model formalizes the moral cleansing theory using Becker's (1976) model of altruism and predicts that the disutility of misbehaving depreciates over time. Overall, the results in Table 5 and Figure 6 provide further empirical support for the moral cleansing effect.

4.5 ADDITIONAL ANALYSES

4.5.1 HETEROGENEITY IN THE EFFECT OF PERSONAL TAX AGGRESSIVENESS

I conduct two additional tests to examine the heterogeneity in the effect of executive-level personal tax aggressiveness on corporate philanthropy. First, both Masulis and Reza (2015) and Cheng et al. (2016) find that corporate prosocial activities (e.g., corporate philanthropy) should be constrained by corporate insiders' share ownership in their firms and/or corporate governance quality if corporate prosocial activities serve to promote managers' personal reputations and preferences at the expense of shareholders (i.e., the agency view of corporate prosocial activities). Since pursuing corporate philanthropy to offset the disutility associated with aggressively obtaining tax savings is tied to the agency view of corporate philanthropy, I examine whether corporate governance moderates the main findings documented in Table 3. I proxy for corporate governance using the fraction of shares owned by institutional blockholders. Existing literature provides empirical evidence consistent with large shareholders playing a monitoring role (Becker, Cronqvist, and Fahlenbrach 2011; Edmans 2014). I test the moderating

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effect of corporate governance by estimating Equation 1 after sorting firms into: (1) firms with the block-ownership percentage in the pre-suspect exercise period above the sample median, and (2) firms with the block-ownership percentage in the pre-suspect exercise period below the sample median. Column (1) of Table 6 presents the results. The coefficient on the difference-in-differences estimator is 0.059 and statistically significant when corporate governance is relatively weak; however, it is 0.000 and statistically insignificant when corporate governance is relatively strong. These results are consistent with the hypothesis that stronger corporate governance restricting corporate insiders' moral cleansing behavior.

Second, Navarro (1988) finds that corporate philanthropy is found to serve as an advertising tool. According to Sutton's (1991) hypothesis, advertising, in general, is used to differentiate products, increase product demand, and enhance barriers to entry. Thus, corporate insiders could be able to better justify/rationalize their moral-cleansing led pursuit for corporate philanthropy to themselves and to their corporate shareholders as a product differentiation strategy in a highly competitive environment. I test this hypothesis by estimating Equation 1 after sorting my sample into: (1) firms operating in two-digit SIC industries designated as having low concentration (HHI≤1,500) by the US Department of Justice (DOJ) and (2) firms operating in two-digit SIC industries with 1,500<HHI. HHI is measured in the pre-suspect exercise period. Column (2) of Table 6 presents the results. The coefficient on the difference-in-differences estimator is 0.055 and statistically significant when HHI is less than or equal to 1,500; however, it is -0.025 and statistically significant when HHI is greater than 1,500. These results are consistent with highly competitive environments accommodating corporate insiders' moral cleansing behavior.

4.5.2 REPUTATION MANAGEMENT AT THE CORPORATE LEVEL

In the late 2000s, option backdating practices (i.e., backdating option grants and exercises) by executives came into light in the media and received considerable attention. While executives were the main focus of the attention in the media, it is possible that the firms associated with option backdating practices came under scrutiny for having low corporate governance quality or carrying out "bad" executive compensation practices as pointed out in the Wall Street Journal article, "The Perfect Payday." Such backlash against potentially poor corporate governance could have also prompted the firms to manage their corporate reputation in anticipation of or in response to the discovery of option exercise backdating, and, as explained in Chapter 3.3, there is empirical evidence on firms managing their corporate reputation with a variety of prosocial activities (Chakravarthy et al. 2014). To test whether the positive association between corporate philanthropy and executive-level personal tax aggression can partly be explained by the reputation management motive, I re-estimate Equation 1 only for firms that are exposed to suspect exercises and examine the number of grants response to executive-level personal tax aggression. The idea is that for corporate reputation management through corporate philanthropy to be effective, it should be carried out through new and potentially highly publicized grants. Column (3) of Table 6 reports the number of grants response analysis and fails to show a statistically significant result.[27]

4.5.3 MORAL LICENSING

Existing psychology literature suggests that the hypothesized temporal relation between future "good" behavior and past "bad" behavior could be reversed. Specifically, the moral

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[27] I also estimate the number of grants response specification with Poisson pseudo-maximum likelihood regression; the conclusion remains unchanged.

licensing effect (not the moral cleansing effect) states that individuals likely will misbehave in the future if they have built sufficient reputation for being moral in the past (Merritt et al. 2010). In this study's setting, corporate insiders could choose to be aggressive with personal taxes if they have established sufficiently prosocial/moral image under the umbrella of their firms' philanthropy. If this is the case, then corporate philanthropy may not only be a consequence of executive-level personal tax aggressiveness but also a determinant of executive-level personal tax aggressiveness. I test whether the moral licensing effect is also present in the data by estimating the following cross-sectional regression model:

$$SuspectExerciseEvent_{iet} = \beta PEP_{iet} + \delta X_{iet} + \omega_t + \varepsilon_{iet,} \tag{3}$$

where i, e, and t index firms, event, and year, respectively. *SuspectExerciseEvent* equals 1 for firm-year observations associated with suspect exercises. *PEP* reflects pre-suspect exercise philanthropy and represents one of two variables. First, *PEP* is an indicator variable that equals 1 if the three-year average level of corporate philanthropic activities in the pre-exercise-and-hold transaction period is above the sample median. Second, *PEP* is the three-year average level of corporate philanthropic activities in the pre-exercise-and-hold transaction period deflated by total assets. *X* are firm-level control variables (same as those included in Equation 1). Ω_t is year fixed effects. E_{iet} is the error term.

Columns (1), (2), and (3) of Table 7 present the results from running three different cross-sectional specifications to test the presence of moral licensing effect. All three columns in Table 7 show that the intensity of corporate philanthropy in pre-suspect exercise years is not a determinant of corporate executive's personal tax aggressiveness. Overall, the results in Table 7 suggest that the presence of moral licensing effect in the data is not likely.

4.6 ROBUSTNESS

Table 8 checks the robustness of the main results documented in Table 3. In all of my empirical tests, I allow for correlation of errors within firm. Clustering standard errors at the firm level accommodates arbitrary (1) within-firm, time-series correlation of errors and (2) within-firm, cross event-cohort correlation of errors. In columns (1) and (2) of Table 8, I check whether the clustering approach throughout my analyses are conservative by experimenting with two other clustering assumptions. Clustering at the firm-event-cohort level, which allows for time-series correlation of errors for a firm's seven-year panel around each of its exercise-and-hold transactions, does not alter the statistical significance of Table 3's findings. Column (2) shows that absent any clustering of errors assumption, the statistical significance of the β coefficient remains similar. Columns (1) and (2) together confirm that the firm level clustering assumption deployed throughout my analyses produces conservative standard errors.

Finally, I follow up on the discussion of (1) the sudden increase in corporate philanthropy in 2013 and (2) depository institutions' relatively greater representation in the sample (i.e., 16.15 percent of the sample). The results in columns (3) and (4) of Table 8 show that the main results are not driven by 2013 specific factor and by depository institution specific factors. Overall, the robustness tests, along with the main and additional tests, corroborate the moral cleansing effect as the explanation behind the findings documented in this study. To reject the moral cleansing explanation, the alternative story would need to address (1) the predicted positive relation between executive-level personal tax aggressiveness and corporate philanthropy over different suspect exercise events across different years and (2) the documented cross-sectional results. To the best of my knowledge, it is unclear what other theories would produce the empirical regularities observed in this study.

CHAPTER 5: CONCLUSION

Both corporate philanthropy and personal tax aggressiveness are topics of public interest. While corporate philanthropy helps funding social missions related to human services, health care, education, etc., personal tax aggressiveness is often viewed as an activity that reduces available government resources that fund similar social programs. In this paper, I show that the two constructs of interest are linked through a previously unexplored behavioral explanation. Both psychology and behavioral economics literature suggest that an individual's future prosocial behavior is sensitive to her past misbehavior, a behavior violating her internalized norm or social norm. As an individual misbehaves, she experiences disutility, which then drives her to act in a prosocial manner. Such temporal relation between future "good" behavior and past "bad" behavior is often called the moral cleansing effect.

I find evidence consistent with misbehaving (personally tax aggressive) corporate executives pursuing prosocial corporate policies (i.e., corporate philanthropy). Following the events representing personal tax aggression, firms with personally tax aggressive executives increase corporate philanthropic activities in comparison to their control firms. This sensitivity of corporate philanthropy with respect to corporate executives' personal tax aggressiveness is dependent on social norm at executives' respective firms. When more than one executive at the same firm is personally tax aggressive, the moral cleansing effect disappears. That is, when a culture (or peers) within an organization seems to accommodate "bad" behavior, the documented empirical evidence is consistent with misbehaving executives not experiencing disutility. Overall, the findings presented in this paper suggest that corporate executives give back to society using shareholder resources while taking resources away from the government to make

personal tax gains. This paper provides an interesting partial effect that could transpire as the intensity of tax enforcement increases. Nonprofit organizations could lose some of their grants if stronger tax enforcement limits executives' opportunity to be aggressive with their personal taxes.

FIGURES

FIGURE 1. The figure shows the two different channels through which corporations can engage in corporate philanthropy. Corporations can either (1) make endowments/contribute resources (e.g., cash) to their foundations and, subsequently, these corporate-sponsored foundations may donate cash or other goods to recipients or (2) directly make donations with cash, other goods, or services to recipients through their in-house corporate giving programs.
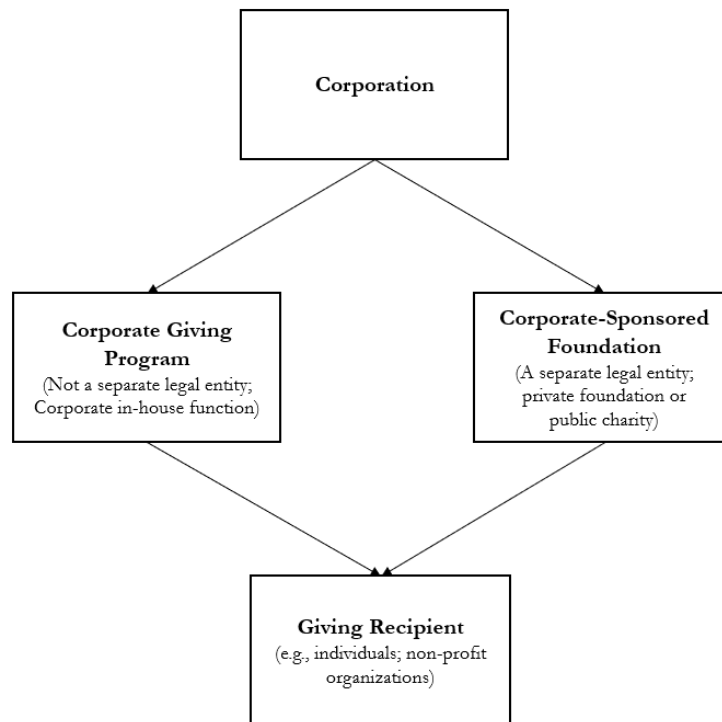
FIGURE 2. Cumulative total/abnormal stock returns around option exercises in the sample (exercise-and-hold transactions). The figure plots cross-sectional average cumulative total and abnormal stock returns in [-30, +30] window surrounding the exercise-and-hold transactions for the sample period (i.e., 2003-2016). A stock option exercise is classified as exercise-and-hold transaction if stock disposition does not follow during the [-3, +3] day window around the stock option exercise date. Abnormal stock return is the difference between raw return and market return.
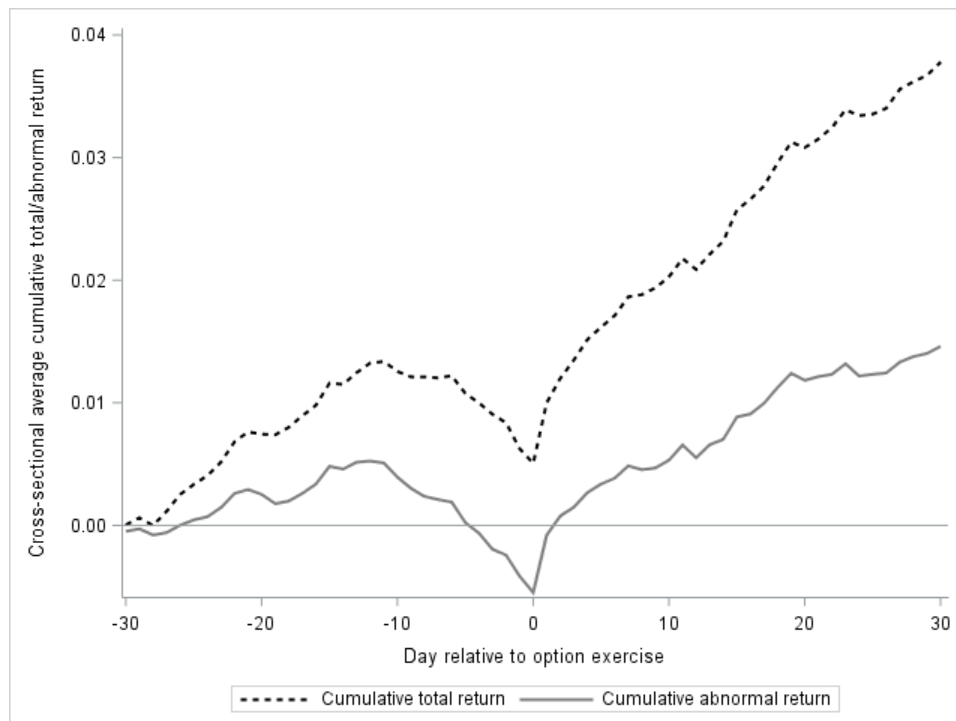
FIGURE 3. Corporate philanthropy from 2003 to 2016 for 934 unique firms in the sample. The data is sourced from Foundation Center's Foundation Directory Online (FDO). The sample period is limited from 2003 to 2016 because the information on corporate philanthropy is only available from 2003 to 2016 on the Foundation Center's online directory. There is a spike in the level of corporate philanthropy in 2013. It is possible that either natural disaster or an act of terrorism drove the level of corporate philanthropy up in 2013. For instance, the Boston Marathon bombings transpired on April 15th of 2013. In Chapter 4.6, I address the potential concern that my study's results are solely driven by the spike in corporate philanthropy in 2013.
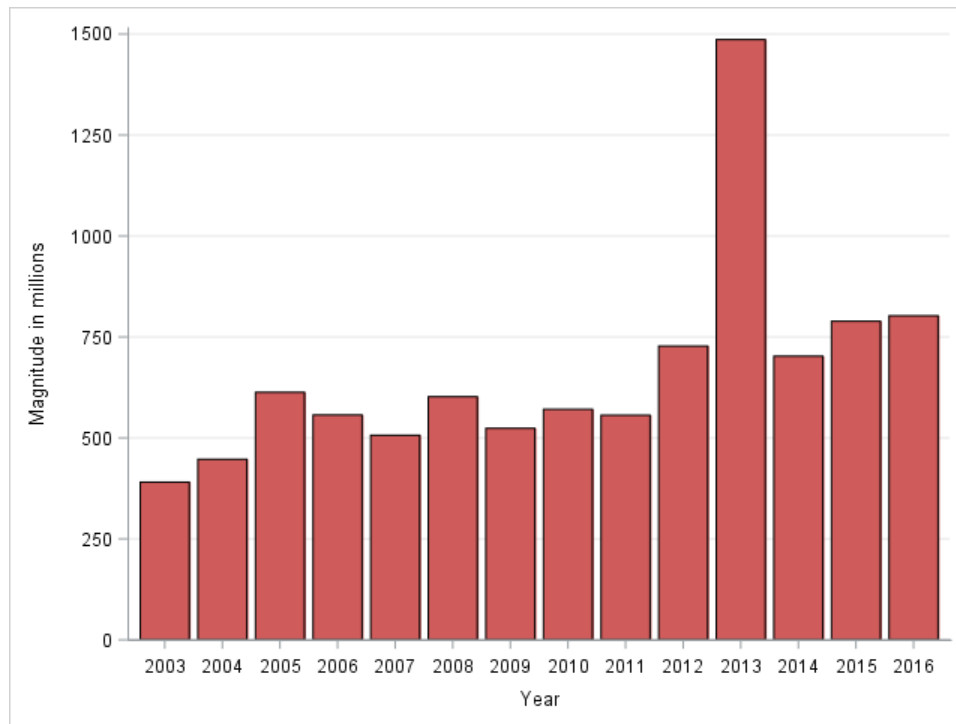
FIGURE 4. Cumulative total stock returns around option exercises for firms classified as *exposed* and *non-exposed*. *Exposed* firms are firms with executives whose option exercises transpire when the options' underlying stock prices are ranked in the bottom quintile of the calendar month price range. A firm is considered as a *non-exposed* firm otherwise. The figure plots cumulative total stock returns in [-30, +30] window surrounding the option exercises for both *exposed* and *non-exposed* firms.
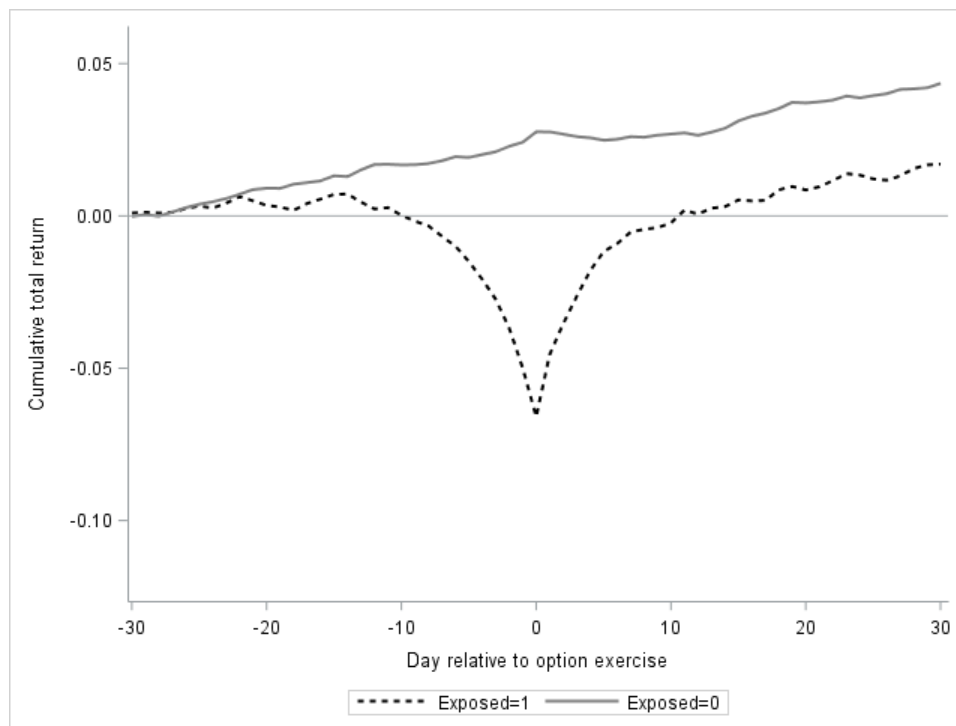

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FIGURE 5. Residualized log of (1+corporate philanthropy) over [-3, +3] window surrounding the option exercise/executive-level tax aggression events. To construct this binned scatter plot, I residualize the log of (1+corporate philanthropy) with firm×event-cohort indicators and plot the mean of this residual variable in each [-3, +3] window surrounding the option exercise/executive-level tax aggression events. The solid line in blue and dashed line in red show the best linear fit estimated for (1) firms not exposed to suspect exercises and (2) firms exposed to suspect exercises in the pre- vs. post-option exercise periods.

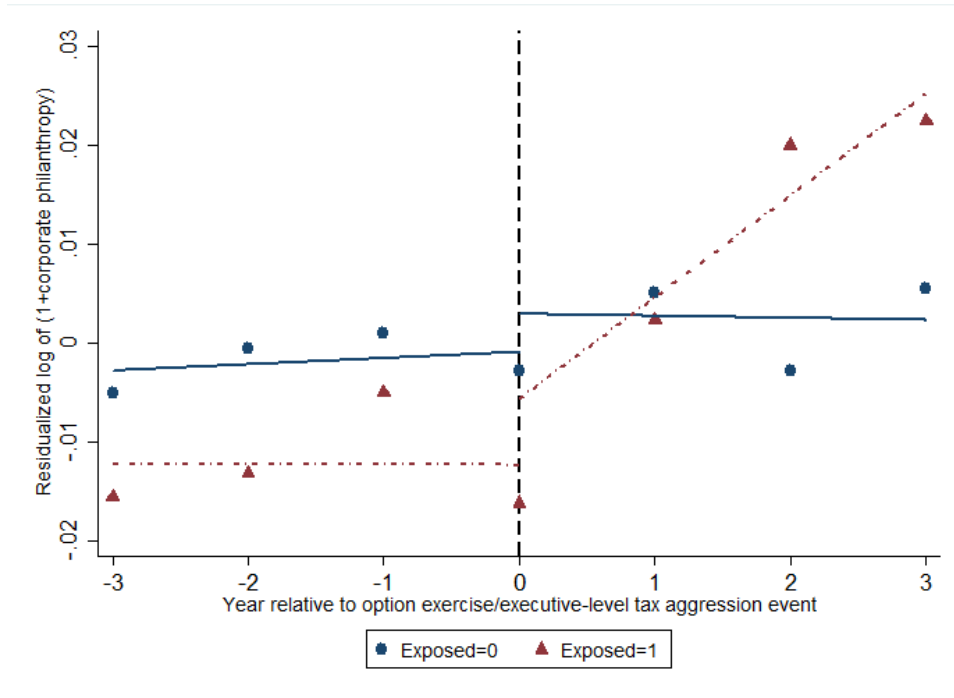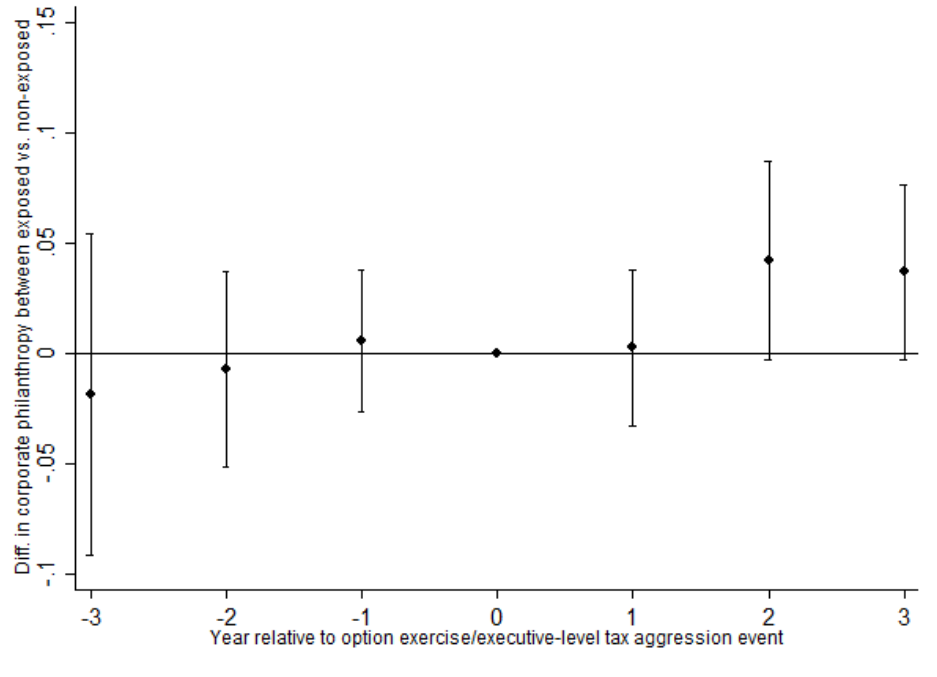FIGURE 6. The estimated dynamic effect of corporate executives' personal tax aggressiveness on Ln(1+corporate philanthropy). The figure plots the difference between the semi-elasticity of corporate philanthropy with respect to corporate executives' option exercises between *exposed* and *non-exposed* firms over [-3, +3] window surrounding the option exercise events.

TABLE 1. This table presents summary statistics for (1) transaction-level option observations (the cross-sectional averages of time-series mean, standard deviation, minimum, median, and maximum of daily price deviation from the transaction date stock price (i.e., daily stock price – transaction date stock price)) and (2) firm-year observations. All scaled variables are winsorized at the top and bottom 1%. For the firm-year characteristics comparison, the difference in group means are tested using t-tests. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A	Full Sample [2003-2016]					
	N	Mean	Std Dev	Min	50th	Max
Transaction-level Observations						
Monthly Price Deviation	1,679	0.19	1.13	−1.62	0.16	2.14
Suspect Exercises	768					
Non-suspect Exercises	911					
Firm-year Observations						
Total	1,350					
With suspect executives	491					
With non-suspect executives	859					
Firm-year Characteristics						
Corp. Phil. [in $mil]	1,350	0.57	4.42	0.00	0.00	92.32
Ln(1+Corp. Phil.)	1,350	0.10	0.48	0.00	0.00	4.54
Advertising-to-Sales	1,350	0.01	0.03	0.00	0.00	0.15
Return on Assets	1,350	0.04	0.16	−0.66	0.06	0.36
Leverage	1,350	0.17	0.19	0.00	0.13	0.92
Size	1,350	6.62	2.00	1.36	6.53	14.60
Market-to-Book	1,350	1.87	1.46	0.63	1.41	8.51
Cash Holdings	1,350	0.20	0.21	0.00	0.10	0.90
Cash Effective Tax Rate	1,350	0.21	0.20	0.00	0.19	1.00
AAER	1,350	0.01	0.10	0.00	0.00	1.00

Panel B	Firm-year Characteristics Comparison				
	All Obs.	[Exposed]	[Non-Exposed]		
	Mean	Mean	Mean	Diff.	p-value
Firm-year Characteristics					
Advertising-to-Sales	0.01	0.01	0.01	−0.00	0.49
Return on Assets	0.04	0.04	0.04	0.00	0.77
Leverage	0.17	0.17	0.17	0.00	0.70
Size	6.62	6.54	6.67	−0.13	0.26
Market-to-Book	1.87	1.90	1.85	0.05	0.58
Cash Holdings	0.20	0.21	0.19	0.01	0.28
Cash Effective Tax Rate	0.21	0.19	0.21	−0.02*	0.08
AAER	0.01	0.01	0.01	0.00	0.96

TABLE 2. This table presents two-digit SIC industries that make up at least one percent of the sample. The first column shows SIC2 industry group titles. The second column shows the SIC2 classification. The third column shows the number of firm-years within the corresponding SIC2 industry group. The fourth column shows the percent of firm-years in the corresponding industry group relative to 1,350 firm-year observations.

	SIC2	No.	%		SIC2	No.	%
Depository Institutions	60	218	16.15	Eating and Drinking Places	58	25	1.85
Electronic and Electrical Equipment and Components	36	134	9.93	Health Services	80	24	1.78
Business Services	73	131	9.70	Communications	48	23	1.70
Chemicals and Allied Products	28	119	8.81	Security and Commodity Brokers, Dealers, Exchange and Services	62	20	1.48
Measuring, Analyzing, and Controlling Instruments and Associated Sensors and Accessories	38	98	7.26	Holding and Other Investment Offices	67	20	1.48
Industrial and Commercial Machinery and Computer Equipment	35	67	4.96	Wholesale Trade – Durable Goods	50	20	1.48
Insurance Carriers	63	37	2.74	Miscellaneous Retail	59	19	1.41
Oil and Gas Extraction	13	33	2.44	Non-depository Credit Institutions	61	16	1.19
Electric, Gas and Sanitary Services	49	32	2.37	Fabricated Metal Products	34	15	1.11
Food and Kindred Products	20	29	2.15	Apparel, Finished Products from Fabrics and Similar Materials	23	14	1.04
Transportation Equipment	37	26	1.93				

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TABLE 3. This table presents results from estimating equation (1). All scaled variables are winsorized at the top and bottom 1%. Please refer to Appendix A for variable definitions. Standard errors (reported in parentheses) are clustered at the firm level and are robust to heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Ln(1+Corporate Philanthropy)			Corp. Phil. [0,1]
Dependent Variable	[1]	[2]	[3]	[4]
Exposed×Post	0.027**	0.027**	0.030**	0.004
	(0.013)	(0.013)	(0.013)	(0.011)
Advertising-to-Sales		−0.103	−0.146	−0.122
		(0.169)	(0.366)	(0.235)
Return on Assets		0.057	0.084	0.045*
		(0.047)	(0.070)	(0.023)
Leverage		0.044	0.084***	0.042
		(0.027)	(0.032)	(0.027)
Size		−0.007	−0.012	−0.008
		(0.007)	(0.011)	(0.009)
Market-to-Book		0.004	0.008*	0.003
		(0.003)	(0.004)	(0.003)
Cash Holdings		−0.019	0.008	−0.004
		(0.027)	(0.029)	(0.023)
Cash Effective Tax Rate		0.004	0.006	−0.001
		(0.009)	(0.011)	(0.016)
AAER		−0.039	−0.020	−0.004
		(0.036)	(0.046)	(0.031)
Firm×Event FEs	Y	Y	Y	Y
Year×Event FEs	Y	Y	N	N
Industry×Year×Event FEs	N	N	Y	Y
Adjusted R-squared	0.853	0.853	0.850	0.657
Number of Observations	7,739	7,739	6,545	6,545

TABLE 4. This table reports results estimating equation (1) after condition *Exposed×Post* variable on *One Personally Tax Aggressive Executive* variable. *One Personally Tax Aggressive Executive* is a dummy variable that equals 1 if only one executive initiates suspect exercise(s) during the year. All scaled variables are winsorized at the top and bottom 1%. Please refer to Appendix A for variable definitions. Standard errors (reported in parentheses) are clustered at the firm level and are robust to heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Ln(1+Corporate Philanthropy)	
Dependent Variable	[1]	[2]
Exposed×Post×One Personally	0.045**	0.094**
Tax Aggressive Executive	(0.021)	(0.041)
Exposed×Post	−0.013	−0.056
	(0.018)	(0.036)
Firm×Event FEs	Y	Y
Year×Event FEs	Y	N
Industry×Year×Event FEs	N	Y
Controls	Y	Y
Adjusted R-squared	0.854	0.850
Number of Observations	7,739	6,545

TABLE 5. This table presents results from examining the dynamic effect of executive tax aggressiveness. All scaled variables are winsorized at the top and bottom 1%. Please refer to Appendix A for variable definitions. Standard errors (reported in parentheses) are clustered at the firm level and are robust to heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Ln(1+Corporate Philanthropy)	
Dependent Variable	[1]	[2]
Suspect Exercise Event [−3 year]	0.001	−0.018
	(0.025)	(0.037)
Suspect Exercise Event [−2 year]	−0.005	−0.007
	(0.016)	(0.023)
Suspect Exercise Event [−1 year]	0.002	0.006
	(0.012)	(0.016)
Suspect Exercise Event [+1 year]	0.011	0.003
	(0.016)	(0.018)
Suspect Exercise Event [+2 year]	0.039**	0.043**
	(0.019)	(0.023)
Suspect Exercise Event [+3 year]	0.031**	0.037**
	(0.015)	(0.020)
Firm×Event FEs	Y	Y
Year×Event FEs	Y	N
Industry×Year×Event FEs	N	Y
Controls	Y	Y
Adjusted R-squared	0.853	0.850
Number of Observations	7,739	6,545

TABLE 6. This table presents results from investigating the heterogeneity in the effect of corporate executives' personal tax aggressiveness on corporate philanthropy in columns (1) and (2). Column (3) shows the number of grants response to executive-level personal tax aggression. *Low Institutional Block Ownership* equals 1 if the fraction of a firm's shares owned by institutional blockholders in pre-suspect exercise period is below the sample median. *Low Concentration* equals 1 if the HHI is less than or equal to 1,500. The US Department of Justice considers markets with HHIs greater than 1,500 either moderately concentrated (1,500<HHI≤,500) or highly concentrated (HHI>2,500). *Num. of Grants* equals the number of grants made per firm-year. All scaled variables are winsorized at the top and bottom 1%. Please refer to Appendix A for variable definitions. Standard errors (reported in parentheses) are clustered at the firm level and are robust to heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable	Ln(1+Corporate Philanthropy)		Num. of Grants
	[1]	[2]	[3]
Exposed×Post	0.000		
	(0.014)		
Exposed×Post×Low Institutional Block Ownership	0.059**		
	(0.027)		
Post×Low Institutional Block Ownership	−0.011		
	(0.018)		
Exposed×Post		−0.025*	
		(0.013)	
Exposed×Post×Low Concentration (HHI≤1,500)		0.055***	
		(0.020)	
Post×Low Concentration (HHI≤1,500)		−0.046	
		(0.034)	
Post			−0.198
			(0.198)
Firm×Event FEs	Y	Y	Y
Industry×Year×Event FEs	Y	Y	Y
Controls	Y	Y	Y
Adjusted R-squared	0.850	0.850	0.547
Number of Observations	6,545	6,545	2,741

TABLE 7. This table presents results from estimating equation (3). Suspect Exercise Event is 1 for firm-year observations associated with corporate executives initiating suspect exercises. Suspect Exercise Event is 0 otherwise. *PEP* stands for pre-suspect exercise philanthropy. *PEP* variable represents two variables. First, *PEP*, in columns (1) and (2), is an indicator variable that equals 1 if the three-year average level of corporate philanthropy in the pre-exercise-and-hold transaction period is above the sample median. Second, *PEP*, in column (3) is the three-year average level of corporate philanthropy in the pre-exercise-and-hold transaction period deflated by total assets. The median split is determined by comparing three-year Avg.[Pre-suspect exercise philanthropy amount/total assets] for the cross-section of firms in the same year. All scaled variables are winsorized at the top and bottom 1%. Please refer to Appendix A for variable definitions. Standard errors (reported in parentheses) are robust to heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable	Suspect Exercise Event [0,1]		
	OLS	Between Estimator	Probit Df/dx
	[1]	[2]	[3]
Pre-suspect Exercise Philanthropy (High)	−0.062	−0.072	
	(0.052)	(0.051)	
Pre-suspect Exercise Philanthropy/Total Assets			8.396
			(19.036)
Year FEs	Y	Y	Y
Controls	Y	Y	Y
Adjusted R-squared	0.016	N/A	0.026
Between R-Squared	N/A	0.007	N/A
Number of Observations	1,189	1,189	1,179

TABLE 8. This table presents the robustness of main results documented in Tables 3 and 4. Specifically, the table shows the robustness of main results to (1) different ways of clustering standard errors, (2) dropping year 2013, and (3) dropping depository institutions from the sample. All scaled variables are winsorized at the top and bottom 1%. Please refer to Appendix A for variable definitions. Standard errors (reported in parentheses) are robust to heteroskedasticity. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Ln(1+Corporate Philanthropy)			
	Clusters [Firm-Event Year]	Robust Std. Err.	Drop Yr[2013]	Drop SIC2=60
Dependent Variable	[1]	[2]	[3]	[4]
Exposed×Post	0.030**	0.030**	0.035**	0.031**
	(0.010)	(0.012)	(0.014)	(0.016)
Firm×Event FEs	Y	Y	Y	Y
Industry×Year×Event FEs	Y	Y	Y	Y
Control	Y	Y	Y	Y
Adjusted R-squared	0.850	0.857	0.850	0.841
Number of Observations	6,545	6,545	6,220	5,377

REFERENCES

Akerlof, G. A., Kranton, R. E., 2000. Economics and identity. The Quarterly Journal of Economics 115, 715–753.

Allingham, M. G., Sandmo, A., 1972. Income tax evasion: a theoretical analysis. Journal of Public Economics pp. 323–338.

Alstadsæter, A., Johannesen, N., Zucman, G., 2018. Who owns the wealth in tax havens? Macro evidence and implications for global inequality. Journal of Public Economics 162, 89–100.

Asch, S. E., Guetzkow, H., 1951. Effects of group pressure upon the modification and distortion of judgments. Documents of Gestalt Psychology pp. 222–236.

Battigalli, P., Dufwenberg, M., 2007. Guilt in games. American Economic Review 97, 170–176.

Baumeister, R. F., Stillwell, A. M., Heatherton, T. F., 1994. Guilt: an interpersonal approach. Psychological Bulletin 115, 243.

Bebchuk, L. A., Grinstein, Y., Peyer, U., 2010. Lucky ceos and lucky directors. The Journal of Finance 65, 2363–2401.

Becker, B., Cronqvist, H., Fahlenbrach, R., 2011. Estimating the effects of large shareholders using a geographic instrument. Journal of Financial and Quantitative Analysis 46, 907–942.

Becker, G. S., 1976. Altruism, egoism, and genetic fitness: economics and sociobiology. Journal of Economic Literature 14, 817–826.

B´enabou, R., Tirole, J., 2010. Individual and corporate social responsibility. Economica 77, 1–19.

B´ergolo, M. L., Ceni, R., Cruces, G., Giaccobasso, M., Perez-Truglia, R., 2018. Tax audits as scarecrows: Evidence from a large-scale field experiment .

Bernile, G., Jarrell, G. A., 2009. The impact of the options backdating scandal on shareholders. Journal of Accounting and Economics 47, 2–26.

Bertrand, M., Schoar, A., 2003. Managing with style: the effect of managers on firm policies. The Quarterly Journal of Economics 118, 1169–1208.

Biggerstaff, L., Cicero, D. C., Puckett, A., 2015. Suspect ceos, unethical culture, and corporate misbehavior. Journal of Financial Economics 117, 98–121.

Boatsman, J. R., Gupta, S., 1996. Taxes and corporate charity: empirical evidence from microlevel panel data. National Tax Journal pp. 193–213.

Brown, W. O., Helland, E., Smith, J. K., 2006. Corporate philanthropic practices. Journal of Corporate Finance 12, 855–877.

Card, D., Hallock, K. F., Moretti, E., 2010. The geography of giving: the effect of corporate headquarters on local charities. Journal of Public Economics 94, 222–234.

Chakravarthy, J., DeHaan, E., Rajgopal, S., 2014. Reputation repair after a serious restatement. The Accounting Review 89, 1329–1363.

Cheng, I.-H., Hong, H., Shue, K., 2016. Do managers do good with other people's money? Working paper.

Chyz, J. A., 2013. Personally tax aggressive executives and corporate tax sheltering. Journal of Accounting and Economics 56, 311–328.

Cicero, D. C., 2009. The manipulation of executive stock option exercise strategies: information timing and backdating. The Journal of Finance 64, 2627–2663.

Cronqvist, H., Makhija, A. K., Yonker, S. E., 2012. Behavioral consistency in corporate finance: Ceo personal and corporate leverage. Journal of Financial Economics 103, 20–40.

Davis, J. S., Hecht, G., Perkins, J. D., 2003. Social behaviors, enforcement, and tax compliance dynamics. The Accounting Review 78, 39–69.

DeBacker, J., Heim, B. T., Tran, A., 2015. Importing corruption culture from overseas: evidence from corporate tax evasion in the united states. Journal of Financial Economics 117, 122–138.

Dechow, P. M., Ge, W., Larson, C. R., Sloan, R. G., 2011. Predicting material accounting misstatements. Contemporary Accounting Research 28, 17–82.

Dhaliwal, D., Erickson, M., Heitzman, S., 2009. Taxes and the backdating of stock option exercise dates. Journal of Accounting and Economics 47, 27–49.

Donohoe, M. P., 2015. The economic effects of financial derivatives on corporate tax avoidance. Journal of Accounting and Economics 59, 1–24.

Dwenger, N., Kleven, H., Rasul, I., Rincke, J., 2016. Extrinsic and intrinsic motivations for tax compliance: Evidence from a field experiment in 59inneso. American Economic Journal: Economic Policy 8, 203–32.

Dwenger, N., Treber, L., 2018. Shaming for tax enforcement: evidence from a new policy .

Dyreng, S. D., Hanlon, M., Maydew, E. L., 2010. The effects of executives on corporate tax avoidance. The Accounting Review 85, 1163–1189.

Dyreng, S. D., Hanlon, M., Maydew, E. L., Thornock, J. R., 2017. Changes in corporate effective tax rates over the past 25 years. Journal of Financial Economics 124, 441–463.

Edmans, A., 2014. Blockholders and corporate governance. Annu. Rev. Financ. Econ. 6, 23–50.

Fos, V., Tsoutsoura, M., 2014. Shareholder democracy in play: career consequences of proxy contests. Journal of Financial Economics 114, 316–340.

Fried, J. M., 2008. Option backdating and its implications. Wash. & Lee L. Rev. 65, 853.

Friedman, M., 1970. The social responsibility of business is to increase its profits. New York Times Megazine 32, 122–126.

Gneezy, U., Imas, A., Madar´asz, K., 2014. Conscience accounting: emotion dynamics and social behavior. Management Science 60, 2645–2658.

Gormley, T. A., Matsa, D. A., 2011. Growing out of trouble? Corporate responses to liability risk. The Review of Financial Studies 24, 2781–2821.

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

Harris, J. F., Klepper, A., 1976. Corporate philanthropic public service activities: a research report from the Conference Board's Division of Public Affairs Research. No. 688, The Board.

Joulfaian, D., 2000. Corporate income tax evasion and managerial preferences. Review of Economics and Statistics 82, 698–701.

Kahn, F. S., 1996. Pandora's box: Managerial discretion and the problem of corporate philanthropy. UCLA L. Rev. 44, 579.

Kaplan, S. N., Klebanov, M. M., Sorensen, M., 2012. Which ceo characteristics and abilities matter? The Journal of Finance 67, 973–1007.

Kleven, H. J., Knudsen, M. B., Kreiner, C. T., Pedersen, S., Saez, E., 2011. Unwilling or unable to cheat? Evidence from a tax audit experiment in 59inneso. Econometrica 79, 651–692.

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Kothari, S. P., Warner, J. B., 2007. Econometrics of event studies. In: Handbook of Empirical Corporate Finance, Elsevier, pp. 3–36.

Law, K. K. F., Mills, L. F., 2017. Military experience and corporate tax avoidance. Review of Accounting Studies 22, 141–184.

Li, S. X., Eckel, C., Grossman, P. J., Brown, T. L., 2015. Directed giving enhances voluntary giving to government. Economics Letters 133, 51–54.

Lisowsky, P., Robinson, L., Schmidt, A., 2013. Do publicly disclosed tax reserves tell us about privately disclosed tax shelter activity? Journal of Accounting Research 51, 583–629.

List, J. A., 2011. The market for charitable giving. Journal of Economic Perspectives 25, 157–80.

Luttmer, E. F. P., Singhal, M., 2014. Tax morale. Journal of Economic Perspectives 28, 149–68.

Malmendier, U., 2018. Behavioral corporate finance. Handbook of Behavioral EconomicsFoundations and Applications 1 p. 277.

Malmendier, U., Tate, G., 2005. Ceo overconfidence and corporate investment. The Journal of Finance 60, 2661–2700.

Malmendier, U., Tate, G., Yan, J., 2011. Overconfidence and early-life experiences: the effect of managerial traits on corporate financial policies. The Journal of Finance 66, 1687–1733.

Masulis, R. W., Reza, S. W., 2015. Agency problems of corporate philanthropy. The Review of Financial Studies 28, 592–636.

Merritt, A. C., Effron, D. A., Monin, B., 2010. Moral self-licensing: when being good frees us to be bad. Social and personality psychology compass 4, 344–357.

Navarro, P., 1988. Why do corporations give to charity? Journal of Business pp. 65–93.

Parsons, C. A., Sulaeman, J., Titman, S., 2018. The geography of financial misconduct. The Journal of Finance 73, 2087–2137.

Roll, R., 1986. The hubris hypothesis of corporate takeovers. Journal of business pp. 197–216.

Sachdeva, S., Iliev, R., Medin, D. L., 2009. Sinning saints and saintly sinners: the paradox of moral self-regulation. Psychological Science 20, 523–528.

Scholes, M. S., Wolfson, M. A., Erickson, M. M., Hanlon, M. L., Maydew, E. L., Shevlin, T. J., 2014. Taxes and Business Strategy: A Planning Approach. Pearson.

Slemrod, J., 2018. Tax compliance and enforcement. Working paper.

Slemrod, J., Bakija, J., 2017. Taxing ourselves: a citizen's guide to the debate over taxes. MIT Press.

Slemrod, J., Blumenthal, M., Christian, C., 2001. Taxpayer response to an increased probability of audit: evidence from a controlled experiment in 60innesota. Journal of Public Economics 79, 455–483.

Sutton, J., 1991. Sunk costs and market structure: Price competition, advertising, and the evolution of concentration. MIT press.

Tetlock, P. E., Kristel, O. V., Elson, S. B., Green, M. C., Lerner, J. S., 2000. The psychology of the unthinkable: taboo trade-offs, forbidden base rates, and heretical counterfactuals. Journal of Personality and Social Psychology 78, 853.

Turner, J. C., 1991. Social influence. Thomson Brooks/Cole Publishing Co.

Werbel, J. D., Carter, S. M., 2002. The ceo's influence on corporate foundation giving. Journal of Business Ethics 40, 47–60.

West, C., Zhong, C.-B., 2015. Moral cleansing. Current Opinion in Psychology 6, 221–225.

Zhong, C.-B., Liljenquist, K., 2006. Washing away your sins: threatened morality and physical cleansing. Science 313, 1451–1452.

APPENDIX A: VARIABLE DEFINITIONS

Variable	Definition
Corporate Philanthropy	Corporate philanthropy is reported in $ millions. It is obtained from Foundation Center's online directory for firms identified in the exercise-and-hold sample between 2003 and 2016. Specifically, I collect both philanthropic grant amounts from both (1) corporate-sponsored foundations and (2) corporate giving programs.
Num. of Grants	The number of grants made per firm-year.
Exposed	Exposed variable is 1 when the market value of underlying share associated with option exercise transaction is ranked in the bottom quintile of the option exercise calendar month prices. For example, if an executive exercises her stock option on March 3, 2013, then I obtain the underlying share's daily prices in all of March (i.e., prices from March 1st to 31st) and rank these prices into quintiles. If the option exercise transaction date share price is in the bottom quintile, then Exposed equals 1. Exposed variable is 0 otherwise.
Post	Post variable is 1 for the three years following the year of option exercise transaction. Post variable is 0 otherwise.
Advertising-to-Sales	Advertising expenditure [XAD] divided by Sales [SALE]
Return on Assets	Pre-tax income [PI] adjusted for special items [SPI] divided by total assets [AT]
Leverage	(Current liabilities [DLC] plus long-term debt [DLTT]) divided by total assets [AT]
Size	Natural log of total assets [AT]
Market-to-Book	(Total assets [AT] minus (total assets [AT] minus total liabilities [LT] plus deferred taxes and investment tax credit [TXDITC]) plus (closing price [PRCC F] multiplied by common shares outstanding [CSHO]) divided by total assets [AT]
Cash Holdings	Cash and short-term investments [CHE] divided by total assets [AT]
Cash Effective Tax Rate	The ratio of cash taxes paid [TXPD] to pre-tax income [PI] adjusted for special items [SPI]
Accounting and Auditing Enforcement Releases (AAERs)	These releases are issued by the SEC "during or at the conclusion of an investigation against a company, an auditor, or an officer for alleged accounting and/or auditing misconduct" (Dechow, Ge, Larson, and Sloan 2011). The AAER dataset is obtained from https://www.marshall.usc.edu/departments/leventhalschool-accounting/faculty/aaer-dataset.
Institutional Block Ownership	The fraction of a firm's shares owned by institutional blockholders.
HHI	The sum of firm-level squared market shares within a two-digit SIC industry in a given year.

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