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Regulatory Focus and Effective Tax Rates

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調節焦點與企業避稅

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本論文係李彥寬 (R02722048) 在國立臺灣大學會計學系、所完成之碩 (博) 士學位論文，於民國 104 年 6 月 30 日承下列考試委員審查通過及口試及格，特此證明

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摘要



過去研究發現，企業經理人的個人特質對於企業避稅行為之有無、避稅金額之大小皆有顯著影響。同時依據心理學的調節焦點理論(Regulatory Focus Theory)，具有促進型目標定向(Promotion Focus)者有追求高額績效及報酬之傾向；反之具有預防型目標定向(Prevention Focus)者則較為謹慎，為了避免風險願意放棄追求額外報酬。以上述兩種理論為基礎，本文的研究目的為探討具有促進型目標定向之經理人，在企業避稅行為上是否與具有預防型目標定向之經理人間存在顯著之差異。本文使用經理人的目標定向為自變數，並以企業避稅程度為依變數(分別使用實際稅率、財稅差異等多種變數衡量)。本研究發現具有促進型目標定向之經理人在從事企業避稅的意願和金額上都顯著高於具預防型目標定向之經理人，顯示具促進型目標定向之經理人相較於具預防型目標定向之經理人更願意為了追求高額報酬而承擔額外的風險。但本研究並未發現具預防型目標定向之經理人與企業稅捐負擔成正向關係。

關鍵字：調節焦點理論，企業避稅，促進型目標定向，預防型目標定向，經理人特質

Abstract



This study investigates whether CEO personality can influence corporate tax avoidance. According to regulatory focus theory, people with a “promotion focus” are more eager to reach higher performance and benefits, whereas people with a “prevention focus” are more willing to give up additional benefits to avoid the associated risks. The purpose of this study is to find out whether a strongly promotion-focused CEO would act significantly differently from a strongly prevention-focused CEO in avoiding tax. Using CEO regulatory focus as independent variables, and use measures of corporate tax avoidance (such as effective tax rate and book tax difference) as dependent variables, I find promotion-focused CEOs are significantly more aggressive in avoiding taxes, compared with prevention-focused CEOs. This result indicates that strongly promotion-focused CEOs are more willing to maximize their financial performance, even with the costs of additional risks. But I do not find significant positive relation between strongly prevention-focused CEOs and corporate tax burden as I expected.

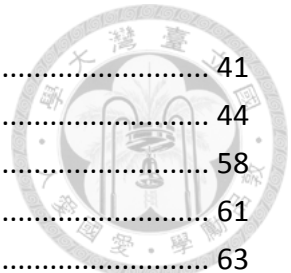
Keywords: Regulatory focus theory, Tax avoidance, Promotion focus, Prevention focus, CEO characteristics

目錄



口試委員審定書	2
摘要	3
Abstract.....	4
1. Introduction	7
2. Literature Review	11
2.1 The Costs and Benefits of Tax Avoidance	11
2.11 Benefits of Tax Avoidance	11
2.12 Costs of Tax Avoidance	11
2.2 Determinants of Tax Avoidance.....	12
2.2.1 Corporate Governance and Agency Cost	12
2.2.2 Debt Status.....	14
2.2.3 Compensation Policy.....	15
2.2.4. Managerial Characteristics	16
2.2.4.1 <i>CEO Background</i>	16
2.2.4.2 <i>CEO Managerial Ability</i>	17
2.3 Prevention and Promotion Focus Theory	20
2.3.1 Regulatory Focus Theory	20
2.3.1.1 <i>People with a Prevention Focus</i>	21
2.3.1.2 <i>People with a Promotion Focus</i>	22
2.3.3 Institutional factors	23
2.3.4 Regulatory Fits	24
3. Hypothesis Development – CEO Regulatory Focus and Tax Avoidance.....	25
3.1 Strongly Promotion-Focused CEO.....	25
3.2 Strongly Prevention-Focused CEO	26
4. Research Design	28
4.1 Proxies for Tax Avoidance	28
4.1.1 GAAP Effective Tax Rate (<i>GAAP ETR</i>).....	28
4.1.2 Cash Effective Tax Rate (<i>CETR</i>).....	29
4.1.3 Long-term Cash Effective Tax Rate (<i>LT_CETR</i>)	30
4.2 Proxies for Regulatory Focus	32
4.3 Baseline Regression Model	33
4.4 Sample and Descriptive Statistics	36
5. Empirical results	38
5.1 Results of Estimating Model (1) with ETR, CETR, LT_CETR as Tax Avoidance Proxies	38
6. Additional Analyses: Book-Tax Difference.....	39

7. Conclusion.....	41
References:	44
Appendix : Variable Definition	58
Table 1 Descriptive Statistics	61
Table 2 Correlation Table.....	63
Table 3 Results of Estimating Model (1), Using ETR, CETR, LT_CETR as Tax Avoidance Proxies	66
Table 4 Results of Estimating Model (1), Using MP_BT D as Tax Avoidance Proxies	68



1. Introduction

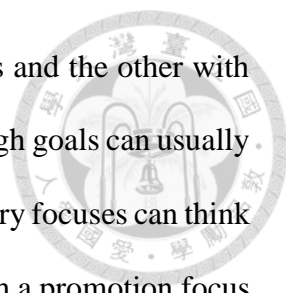


In this study, I examine the impact of CEO regulatory focus on corporate tax avoidance. Although there is a long history of researches about tax avoidance, there is still an incomplete understanding of why some firms are more tax aggressive than other firms. Recent studies show that a substantial variation exists in the level of tax avoidance (Weisbach, 2002; Dyreng et al., 2008). While many studies have examined the determinants of tax avoidance¹, many studies argue that there is still a big discrepancy exists. For example, Hanlon and Heitzman (2010) summarize that “overall, the field cannot explain the variation in tax avoidance very well”, and suggest more work needs to be done. In addition, Dyreng, Hanlon, and Maydew (2010) investigate the role of different managers (including CEO, CFO, or others who actually act as managers), and indicate that manager fixed effects can significantly influence the level of tax avoidance, after controlling other firm characteristics affecting tax avoidance.

This means that some managers are more eager to decrease tax burden; while others tend to be law-abiding, and are not so aggressive in tax planning. However, they do not find that common individual characteristics such as education, gender and age can explain this variation. This may suggest that some other managerial characteristics may drive tax avoidance.

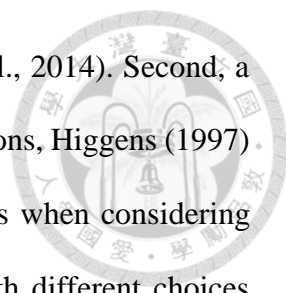
To fill the gap, I continue this line of researches by studying the relation between CEO attributes and corporate tax avoidance. I use one type of psychological measure, regulatory focus, as my proxy of CEO attributes. According to Higgins (1998), regulatory

¹ For example, many studies find that corporate tax avoidance is systematically associated with certain type of firm attributes, such as level of profitability (Scholes and Wolfson, 1992), capital structure (Desai and Dharmapala, 2009), the extent of foreign operations (Desai, Foley, and Hines, 2006; Dyreng and Lindsey, 2009), intangible assets, research and development expenditures (Desai and Dharmapala, 2006), leverage, and financial reporting (Frank, Lynch, and Rego, 2009).



focus theory divide people into two types, one with promotion focus and the other with prevention focus, depending on their strategies to attain goals. Although goals can usually be attained by using different strategies, people with different regulatory focuses can think and act quite differently from others. To be more specific, People with a promotion focus have a preference for eagerness strategies. They show traits including “advancement, aspiration, and accomplishment (the presence or absence of positive outcomes)” (Higgins and Spiehel, 2004). They would place more importance on rewards and accomplishments. Promotional focus sensitizes people to positive features of situations associated with an exploratory orientation (Lanaj, Chang and Johnson, 2004). In contrast, people with a prevention focus, are defined as having a preference for vigilance strategies. They show traits including “protection, safety, and responsibility (more generally speaking, the presence or absence of negative outcome)” (Higgins and Spiehel, 2004). Such kind of regulatory focus sensitize people to the presence and absence of negative stimuli and the importance of safety, responsibility, and security. It is associated with a conservative approach seeking to reduce vulnerability and uncertainty via vigilance strategies, insuring “correct rejections and insure against errors of commission”. They are geared to minimizing losses and maximizing non-losses (Crowe and Higgins, 1997).

In this study, I expect that CEOs in a strong promotion focus exhibit a systematically different level of tax avoidance compared to CEOs in a strong prevention focus. I first expect promotion-focused CEOs would take more tax avoidance actions than other CEOs. This is because of three reasons. First, a strongly promotion-focused people are going to maximize gains and minimize non-gains (Cesario, Higgins, and Scholer, 2008). And a strongly promotion-focused people are also associated with measuring their accomplishment as the quantity and value of output as they are eager to reach higher goals;



they value the speed and amount of accomplishment (Gamache et al., 2014). Second, a strongly promotion-focused people tend to positively evaluate situations, Higgins (1997) point out promotion-focused people are more optimistic than others when considering possible solutions (more specifically, potential gains associated with different choices carry more weights than potential losses). Third, strongly promotion-focused not only tend to positively judge potential opportunities, they are also inclined to take advantage of every perceived gains (Crowe and Higgins, 1997).

I also expect a strongly prevention-focused CEO to be less aggressive in tax avoidance. First, a strongly prevention-focused CEO is used to using vigilance strategies, instead of chasing growth to the most (Higgins and Spiehel, 2004). In the context of tax managements, strongly prevention-focused CEOs would first think of the negative outcomes. Once being caught by the government for being dishonest with its tax returns, the firm would face a huge amount of fine, as well as a higher frequency of government auditing since the firm is labeled as high-risk targets (Mills, 1998). Strongly prevention-focused CEOs would try to avoid tax only when there are sufficient confident that their investment in managing tax burden can be fully recovered, which is not easy for tax experts, thereby retaining the worries of being caught.

Using a sample of 4,097 firm-year observations between 2002 and 2011, and different proxies of tax avoidance, plus a content analysis into letters to shareholders, most of the results indicate that firms with strongly promotion-focused managers are associated with significantly higher level of tax avoidance, while strongly prevention-focused CEOs only show a slightly negative relation to tax avoidance, after controlling for firm characteristics.

My results are mostly consistent with my hypothesis, that strongly promotion-focused CEOs would show significantly different level of tax avoidance when compared with strongly prevention-focused CEOs, with strongly promotion-focused CEOs are eager to maximize their performance through avoiding tax burden.

My study makes several contributions to prior tax and psychology literatures in various ways. First, I extend prior works of Dryeng by going beyond traditional demographic CEO characteristics and introduce regulatory focus theory as my psychological measure of CEO characteristics, to further examine tax avoidance from a brand new angle. Second, I provide strong evidence regarding the role of CEO characteristics in corporate decisions, by showing how CEO psychological characteristics influence corporate tax avoidance, which opens a new area for future research. This study also leaves several new lines of inquiry, including whether different firms would prefer to choose CEOs with certain type of regulatory focus? Or whether CEOs with strong promotion focus would show higher managerial ability than their peers with strong prevention focus? I leave those questions for future research. In conclusion, my findings have important public policy implications.

The remainder of the paper is organized as follows. Section 2 reviews prior studies relevant to my study. Section 3 develops the hypothesis. Section 4 describes details of my research designs and sample selection. Section 5 presents the results of baseline regression. Section 6 comes additional test. And Section 7 concludes.

2. Literature Review



2.1 The Costs and Benefits of Tax Avoidance

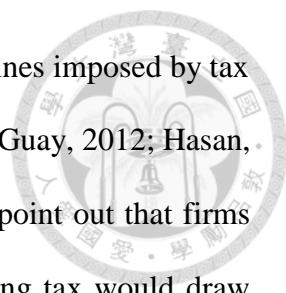
2.1.1 Benefits of Tax Avoidance

The benefits from avoiding tax liabilities are straightforward, but the most important one is increased firm value. Desai and Dharmapala (2009) argue that cash savings result from tax avoidance should go to shareholders, and increase firm value (which is measured by Tobin's q (Demsetz and Lehn, 1985)). In their study, they not only prove an insignificantly positive relation between tax avoidance and firm value; but also find a significantly positive relation between tax avoidance and firm value when sample firms are well-governed (they use the ratio of institutional ownership as their proxy of corporate governance). These results suggest that although avoiding tax liabilities can certainly create additional savings, this would not benefit shareholders unless the firms are well-governed.

Kim, Li, and Zhang (2010) also investigate how markets response (measured by changes of stock price) to news about firms getting involved with tax avoidance. In their study, stock prices usually experience significant declines after the announcements of news about tax shelter involvements, and they also find these negative responses would be less strong for firms with better corporate governance (Kim, Li, and Zhang, 2010). Their finding is consistent with Desai and Dharmapala (2009), and provide more support that the agency problem is a key determinant which affecting how shareholders evaluate the influence of tax avoidance.

2.1.2 Costs of Tax Avoidance

Prior studies show that tax avoidance is associated with significant costs, direct costs include tax planning, litigation, and other expenses of mounting a defense against tax



authority challenges, back taxes and potentially hefty penalties and fines imposed by tax authorities (Desai and Dharmapala, 2006; Balakrishnan, Blouin, and Guay, 2012; Hasan, Hoi, Wu, and Zhang, 2014). Hoopes, Mescall, Pittman (2012) also point out that firms with lower level of corporate governance and higher risk of avoiding tax would draw more monitoring from IRS auditors thus increase the cost of tax avoidance.

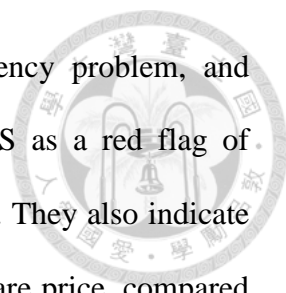
Indirect costs include political costs, potential damage to the firm's reputation, cost of debt capital (e.g., Hanlon and Slemrod, 2009; Graham, Hanlon, Shevlin, and Shroff, 2013; Barton, Hasen, and Pownall, 2010), and price discount from shareholder (Chen, Chen, Cheng, and Shevlin, 2010). Hanlon and Slemrod(2009) also find that market reacts negatively to news that a firm is involved with tax sheltering, especially for retail industry and firms with lower cash effective tax rate. Desai and Dharmapala (2009) point out that the price discount may be due to the deficiency in corporate governance and the related agency problem, by showing that the increase in firm value from tax avoidance is higher for well-governed firms than other poorly-governed firms.

2.2 Determinants of Tax Avoidance

2.2.1 Corporate Governance and Agency Cost

Agency cost is another non-tax cost associated with corporate tax avoidance, Slemrod (2004) states risk-neutral shareholders expect managers to act on their behalf to focus on profit maximization. And as tax avoidance is assumed to decrease firms' tax burden, it should be favored by shareholder; but whether the benefits from lower tax burden by tax avoiding activities would go to shareholder is not a sure thing.

Desai and Dharmapala (2009) look into this issue by investigating the value of firms with different level of corporate governance. They argue that unless the firm is well



governed, firms taking tax avoidance activities are prone to agency problem, and shareholders of poorly-governed firms would see cheating on IRS as a red flag of management diverting resources from the firms for private interests. They also indicate that this kind of concern would be reflected in lower increase in share price, compared with other well-governed firms.

Hoopes, Mescall, Pittman (2012) also indicate corporate governance is a key factor to tax avoidance. They state that IRS would treat poorly-governed firms as high risk target of taking tax avoiding activities, and increase their audit efforts, which is confirmed to have a negative effect on tax avoidance toward firms. Desai, Foley, Hines (2007), on the other hand, say that when firms are prone to agency problem, a powerful tax authority may play the role of outside monitoring and align the benefits of outside shareholder and tax authorization by deterring agency problems.

Desai and Dharmapala (2009) use abnormal book-tax differences as proxies of tax avoidance, and they find that firms with high institutional ownership have a stronger positive association between book-tax differences. The results suggest that the value shareholders place on corporate tax avoidance depends on their ability to monitor both the manager and firm operation, consistent with governance differences explaining cross-sectional variation in the consequences of tax avoidance.



2.2.2 Debt Status

Deferring taxable income using interest deduction from leverage is another common way to avoid taxes. That's why corporate debt status is crucial in analyzing corporate tax avoidance.

Scholes Wolfson, Erickson, Maydew (1992) find larger companies have greater incentives to shift taxable income to future periods, using deferred income recognition and accelerated recognition of expenses, especially when there is expected to be a decrease in tax rate next year. But there is mixed evidence for the willingness of firms in using interest deduction from leverage to decrease taxable income.

Guenther, Maydew, Nutter (1994) point out that the considerable cost associated to increased leverage would affect firms' willingness. For example, certain debt covenant conditions would regulate the bottom line of reported revenue. If avoiding taxes using leverage is associated with debt covenant violation cost, firms with higher leverage ratios are less willing to report lower income.

Lisowsky (2010), indirectly prove firms would use leverage to avoid taxes by finding a negative relation between tax sheltering and firm leverage. He argue that when firms decide to manage tax burden, there would be a substitution effect between different types of tax avoidance. That is, firms would not use all types of tax avoidance method in

the same time. So by proving the negative relation between tax avoidance (tax sheltering) and leverage, he successfully prove that leverage can be effective in avoiding taxes.



2.2.3 Compensation Policy

While adopting incentive CEO compensation may align the benefit of CEO, CFO and shareholder, compensation determined by after-tax income would encourage top management to maximize net income by tax avoidance. Rego and Wilson (2009) find a significant positive relation between total compensation of CEO, CFO and tax reporting aggressiveness, indicating that compensation provide incentives for CEO, CFO to avoid taxes. But they also state that this kind of tax-based compensation seems lacking a positive relation with the firms' future performance. Benefits from reduced tax burden may be offset by related costs, making this kind of tax avoidance only reflective of optimal contracting and not managerial opportunism (Bebchuk, Fried, and Walker, 2001).

Rego and Wilson (2009) find that compensating CEO on the basis of after-tax benefits is associated with significantly lower effective tax rate. This is consistent with their hypothesis and prior studies (Phillips, 2003; Armstrong, Blouin, and Larcker, 2012) that CEOs would avoid tax liabilities to maximize their personal profits, especially if tax burden is considered in their compensation contract. For example, Phillips (2003) find that compensating division managers based on after-tax income leads to a greater effect on tax planning, meaning a negative relation between tax and compensation. Whereas if we align the benefits of executives and shareholders by using equity based incentives, instead of only financial performance on executives, the link between compensation and tax avoidance may decreases. Desai and Dharmapala (2006) show that as we increase the

equity-based compensation on executives, the useage of tax shelters (which was assumed to be vehicles for rent retraction in the study), would significantly decrease. The results indicate that executives may take tax avoidance as a tools of optimal contracting, instead of maximizing shareholders' benefits.

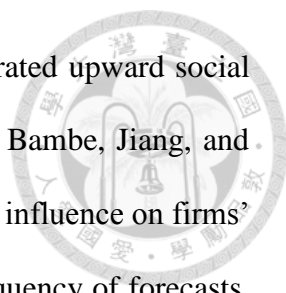
However, Hanlon, Mills, and Slemrod (2005) and Desai and Dharmapala (2006) do not find significant evidence to support this relation. Overall, there are mixed evidence for the relation between CEO compensation and tax avoidance.

2.2.4. Managerial Characteristics

2.2.4.1 CEO Background

In addition to the firm-specific factors, Dyreng, Hanlon and Maydew (2010) argue that managerial fixed effects are important determinants of firms' tax avoidance. They find that the change of CEOs is significantly related to the level of tax avoidance, which is consistent with their hypothesis that CEOs have their own discretion, which would be used to affect corporate tax decisions. But they do not find much evidence that other individual characteristics such as education, gender and age can explain this variations.

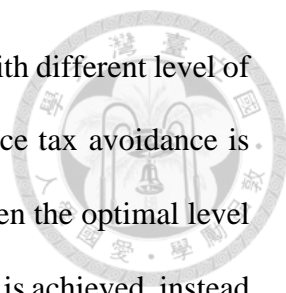
Dyreng et al. (2010) also introduce upper echelons theory into the field of corporate tax avoidance and find out that executives do have significant impact on firms' tax avoiding activities. Upper echelons theory (Hambrick and Mason,1984) is an important theory arguing that how executive characteristics (e.g., formal managerial education , origins from higher or lower socioeconomic, having shares of the firm, or whether executives have alternative source of income) affect the performance of a firm, such as profitability or speed of making decision. For example, Hambrick and Mason (1984) state that organizations led by executives who are young, having extensive formal education,



and from lower socioeconomic (and, by implication, have demonstrated upward social mobility) are more likely to pursue risky and innovative strategies. Bambe, Jiang, and Wang (2010) confirm that the “style” of managers exert a significant influence on firms’ disclosure of financial reports over the following five fields, the frequency of forecasts, forecast precision, news conveyed by the forecast, and the bias in and accuracy of the forecasts. For example, managers from legal backgrounds favor downward guidance, consistent with sensitivity to litigation risk. Managers born before World War II develop more conservative disclosure styles in terms of being more reluctant to forecast. Those with military experience favor more precise disclosure styles that tend to prompt disclosure of unfavorable information. Finally, managers with M.B.A degrees develop styles that tend to guide expectations upward, but are more accurate. But their forecasts are more sensitive to the adverse consequences of inaccurate forecasts. In the context of tax avoidance, Dyreng et al. (2010) find that the more optimistic the executives are, the effective tax rate would be significantly lower. But they fail to find evidence for CEO compensation or education background affecting tax avoidance.

2.2.4.2 CEO Managerial Ability

As to the relation between CEO managerial ability and the tendency to get involved with tax avoidance, there are mixed evidence. Koester, Shevlin, Wangerin (2013) indicate higher managerial ability is positively associated with more tax-efficiency. They are more likely to use tax shelters and recognize more UTB, which is consistent with their presumption that high-ability CEOs aim to increase the efficiency of resources used (which is cash tax payment here), for revenue generating purposes. This is totally different with the discovery of Francis, Sun, and Wu (2013).

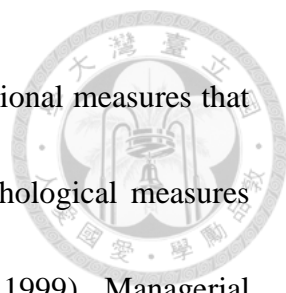


Francis et al. (2013) study the relation between the executives with different level of managerial ability and corporate tax avoidance. They argue that since tax avoidance is already be confirmed not always a strategy to increase firm value, then the optimal level of tax avoidance should be determined when the maximum firm value is achieved, instead of the maximum amount of tax savings. They indicate lower-managerial ability executives are associated with higher level of tax avoidance (measured as tax shelter, which is assumed to be a vehicle for tax avoidance in many related studies); higher-managerial ability executives, whereas, not only use significantly fewer tax avoidance, but higher-managerial ability executives are also significantly positively associated higher accounting quality. In addition, Francis et al. (2013) state higher-managerial ability executives using tax shelters are more favored by investors, compared with other lower-managerial ability executives. The findings are consistent with their hypothesis that high-managerial ability executives are more likely to reach an optimal level of tax avoidance to maximize firm value.

These confusing outcomes left us much rooms for further research about how CEO affect firm's tax avoidance or other managerial decisions.

Other unexplained factors


While many studies have examined the determinants of tax avoidance, many studies argue that there is still a big discrepancy in the understanding of the variations. Hanlon and Heitzman (2010) summarize that “overall, the field cannot explain the variation in tax avoidance very well”, and suggest more work needs to be done.



Recently, some studies suggest that we should go beyond traditional measures that are based on demographic characteristics and focus more on psychological measures (Carpenter, Geletanycz, and Sanders, 2004; Priem, Lyon, and Dess, 1999).. Managerial decisions like tax avoidance, earnings management, or the level of acquisition are more of a psychological attributes, rather than totally mechanical decision making

For example, Chatterjee and Hambrick (2007) use CEO narcissism to see its relation between firm performance and the level of risk taking. As people with tendency of narcissism are thought to be “in love of themselves” and are more confident or optimistic with situations. They find a positive relation between the level of CEO narcissism and firm performance and the number and size of acquisitions.

In addition, Delgado-Garcia, La Fuente-Sabate, and Manuel (2010) study the influence of CEO emotion on strategic decision and performance. They believe that a CEO who is more emotional (with positively affective traits) would lead to more intuitive and creative decision while a CEO who is less affected by emotion (with negatively affective traits) tend to be more objective and rational in decision making. Agle, Nargarajan, Sonnenfeld, and Srivivasan (2006) also find support that emotional factors can effectively affect CEO performance. They find the positive relation between charismatic leadership and operation effectiveness.



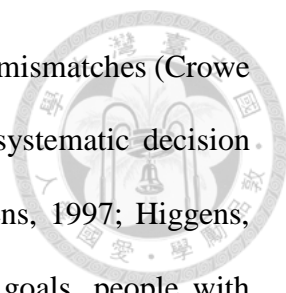
Although the studies of management issues from psychological perspective are relatively fresh, and still under development, they have been proved to worth our attention, and have lots of potential. In this study, I continue this line of researches by studying the relation between CEO attributes and corporate tax avoidance. I use another type of psychological measure, regulatory focus, as my proxy of CEO attributes.

2.3 Prevention and Promotion Focus Theory

2.3.1 Regulatory Focus Theory

Higgins (1998) first defines regulatory focus theory, which attempts to explain almost all the behaviors, actions, cognition of people with a studying of their self-regulation. Regulatory focus not only influences how people set their goals or the strategies people choose to attain their goals, but also deeply impact the way people understanding situations. In addition, people with a promotion focus uses different types of information than people with a prevention focus when they make or justify decisions, unconsciously (Higgins and Spiegel, 2004). The theory simply assumes that there are only two type of people to discuss, distinguished by their distinctive traits: people with a prevention focus and with a promotion focus.

People with a promotion focus emphasizes on the “score” they hit (Crowe and Higgins, 1997). They save no efforts to maximize their accomplishments, and are usually more optimistic, also tending to see situations as opportunities to grow Higgins (1997). The desire to win makes them less sensitive to risks attached to their strategy.



People with a prevention focus emphasize on avoiding errors and mismatches (Crowe and Higgins, 1997). Those people take the time for careful and systematic decision making because they are motivated by “ought” (Crowe and Higgins, 1997; Higgins, 1997). Although both groups of people can probably attain their goals, people with different regulatory focus may choose different paths, and have different definitions of success.

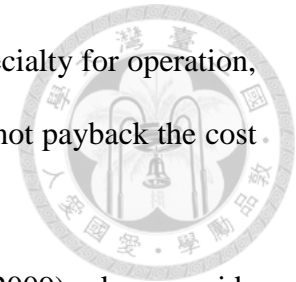
2.3.1.1 People with a Prevention Focus

According to regulatory focus theory, people who are prevention focused are prudent, emphasizing the accuracy, responsibility and security. They would especially emphasize the absence of negative outcomes; they also focus on minimizing errors of commission (e.g., making mistakes in fulfilling goals, Higgins 1998; Higgins and Spiegel, 2004). This doesn't mean that prevention-focused people cannot be as effective as promotion-focused people. They are just more sensitive to negative outcomes or risks associated with potential opportunities. They feel strongly responsible to every decision they made, and want to fulfill their duties perfectly.

In other words, they are motivated by ought (Higgins, 1998). That's why they take more time to prevent from risk of making mistakes with careful and systematical decision making (Crowe and Higgins, 1997). They would spend more time trying to increase effectiveness to the most, making sure the targets are properly reached rather than maximizing gains. This kind of characteristics is also reflected in their strong senses of duties and obligations.

For example, Wowak and Hambrick (2010) provide some evidence about strongly prevention-focused CEOs in the decision making of mergers. They find that strongly prevention-focused CEO would be especially concerned with potentially negative

outcomes after taking the bid, such as the deficiency in essential specialty for operation, or the failure in the integration process such that the synergy could not payback the cost already spent for the merger.



Haleblian, Devers, McNamara, Carpenter, and Davison (2009) also provide evidence how a strongly prevention-focused CEO tend to evaluate potential mergers from a perspective of potential gains. A strongly prevention-focused CEO would be more conservative when evaluating the potential benefits related to any merger. CEOs with a strong prevention focus would be more likely persuaded to support such an investment, if there are significantly potential benefits from higher market shares, strengthened operation efficiency, or huge cost saving from reducing redundant employees. The priority to be concerned with in considering investments or doing other kind of decisions for those CEOs is to make sure the cost is going to be totally paid back, which is completely opposite to the styles of CEO with a promotion focus.

2.3.1.2 People with a Promotion Focus

Prior studies like Higgins and Spiehel (2004) point out that people with a promotion focus emphasize the quantity, speed, scale of acquisition, and the presence or absence of positive outcomes. They also tend to minimize errors of omission (e.g., missing important opportunities to male advancement), and are inclined to chase high performance, choose eagerness strategy, act sooner in response to opportunities, and are willing to take higher risks to reach ideal outcomes (Higgins and Spiegel, 2004). Higgins (1998) suggest promotion-focused people tend to view situations as potential gains or opportunities and value potential gains more salient than potential losses.

Galinsky, Leonardelli, Okhuysen, and Mussweiler (2005) look into the difference in negotiations between people with prevention or promotion focuses. They demonstrate

that promotion focused negotiators achieve superior distributive outcomes than prevention-focused negotiators do in negotiations. People with a promotion focus not only try to “reach” their assigned targets but also devote their efforts to maximize their gains, and pay more attention to their goals than others. In a nutshell, people with a promotion focus respond sooner and try to maximize their gains as compared with their counterparts with prevention focus.

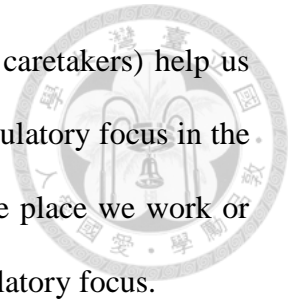
Gamache, McNamara, Mannor, and Johnson (2013) suggest that in corporate acquisition, CEOs that are strongly promotion-focused tend to engage in more acquisitions, as well as higher total value. While CEOs that are strong prevention-focused tend to engage in fewer acquisitions and with smaller total value. As people with a promotion focus is usually more focusing on hitting their goals (Crowe and Higgins, 1997), and is less concerned with the related risks in taking actions, they tend to interpret information about potential investment as positive opportunity (Higgins, 1997).

2.3.3 Institutional factors

Higgins (2000) points out that the tendency of being eager or more prudent can be influenced by some situational factors. Even if we are no longer children, we are still “learning” and modifying our self-regulation. There are possibilities that people with a promotion focus somewhat become less eager in chasing scores; or another people previously with a prevention focus experience a change of his/her regulatory focus, and become more aggressive, after experiencing a dramatic change in environment like switching of jobs or moving to other countries.

It is widely believed that personal traits can be a product from mixed factors. Both internal and external influences are jointly shaping our regulatory focus. According to Gomez, Borges, and Pechmann (2013), internal factors such as childhood experience

(how people interact with their friends in kindergarten or teachers, caretakers) help us develop a sense of self-evaluation, and also shape certain type of regulatory focus in the beginning. External factors come from the environment we live, the place we work or study every day, they also play an important role in shaping our regulatory focus.



2.3.4 Regulatory Fits

In addition, many studies argue that matching the environment with one's goal orientation like regulatory focus can actually increase their performance and level of engagement (Cesario, Higgins, and Scholer, 2008). For example, setting a positive target like scoring high GPA for a promotion-focused people can improve his/her performance, compared with setting a negative target like preventing scoring low.

Freitas and Higgins (2002) provide empirical evidence that high regulatory fit in workplace can increase the willingness and enjoyment, even the perceived success. If we can choose the correct working condition for employees, they would have more motivation to do their jobs. Shah and Kruglanski (2000) also find that people would be much more motivated when their assigned goals and means to attain their target are closely related.

Idson, Liberman, and Higgins (2004) empirically examine the impact of regulatory fit on people's buying decision. Providing promotion-focused consumers with positive suggestions like a big discount with cash payment make them happier than hearing a negative one like avoiding a penalty by paying in cash. These results indicate a possibility of affecting people's decision (or even CEO's management decision) by using different level of regulatory fit.

Using psychological factors to assist management is not new. For example, there are already numerous studies arguing that we should use appropriate compensation package

to encourage CEOs to improve performance, although they may not actually use regulatory focus to prove the relation between matching CEO goal orientation and the motivation effect from different types of compensation. Wowak and Hambrick (2010) also argue that when firms decide to use stock option as compensation, they pay attention to the differences in CEOs' regulatory focus. As people with promotion focus and prevention focus involve different levels of risk tolerance, they would have different responses to stock options, which contain high level of risks.

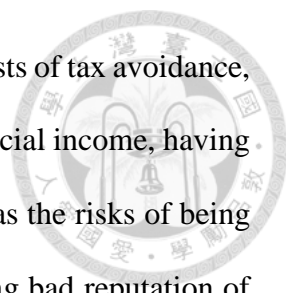
3. Hypothesis Development – CEO Regulatory Focus and Tax Avoidance

3.1 Strongly Promotion-Focused CEO

I expect that promotion-focused CEOs would take more tax avoidance actions than prevention-focused people for the following three reasons:

First, a strongly promotion-focused CEO is going to maximize gains and minimize non-gains (Cesario et al., 2008). Strongly promotion-focused CEOs are likely to value the speed and amount of accomplishment (Gamache et al., 2014; Brockner, 2004). I expect that a strongly promotion-focused CEO propose would spare no effort to maximize their achievements on financial statements and tend to use tax avoidance strategies (like tax sheltering) because they might view tax avoidance to achieve high financial performance as an important accomplishment.

Second, according to Higgins (1998), strongly promotion-focused people tend to positively evaluate situations, and are more optimistic than others when considering possible solutions. Strongly promotion-focused people put more weights on potential gains than potential losses. This tendency will make them simply interpret unclear information into good news, ignoring some bad signals. This kind of “bias” makes them easier to view conditions more optimistic than others do. In the context of tax avoidance,



when strongly promotion-focused people trade off the benefits and costs of tax avoidance, they would emphasize more on the related benefits (e.g., higher financial income, having a promotion or more annual bonus) than on the potential costs such as the risks of being audited by the Internal Revenue Service (IRS), being fined, or having bad reputation of cheating. Strongly promotion-focused people tend to make decisions basing more on information supporting their point of view, and tend to put less attention to information unfavorable to their decision (Higgins and Spiegel, 2004).

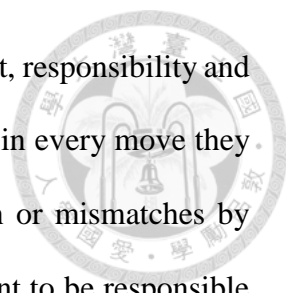
Third, promotion-focused people are associated with efforts to ensure hits and avoid errors of omission (Crowe and Higgins, 1997). This suggests that strongly promotion-focused CEOs cannot tolerate missing opportunities. Since every effort to avoid tax means some chances to improve financial performance, it would be harder for strongly promotion-focused CEO to abandon these chances by not exploiting tax avoidance. In particular, as promotion-focused CEO tend to perceive unfavorable information unimportant such as the related risks of being caught by government, and ignore the information, the potential gains from tax avoidance becomes more intriguing, thereby not allowing themselves to miss the opportunities to avoid tax (Higgins and Spiegel, 2004).

Based on the above three reasons, I form the hypothesis as follows:

***H1a:** CEOs who are strongly promotion-focused exhibit higher level of tax avoidance than others.*

3.2 Strongly Prevention-Focused CEO

In contrast, I expect that CEOs with prevention focus would be less likely to avoid taxes for the following reasons.



First, a prevention-focused CEO, however, is motivated by ought, responsibility and sense of security (Higgins, 1998). They see accuracy as the priority in every move they made, and they make much effort to prevent errors of commission or mismatches by ensuring “hits” (Crowe and Higgins, 1997) because they always want to be responsible for their decisions. Besides, they are also especially sensitive to the presence or absence of negative consequences (Higgins and Spiehel, 2004) like the risks of redundant sunk cost resulting from incorrect decisions (Brockner and Higgins, 2004; Brockner and Higgins, 2001) or being punished for illegal actions.

Second, Strongly prevention-focused CEOs are expected to adopt vigilance strategies, instead of chasing growth to the most (Higgins and Spiehel, 2004). When making decision on tax avoidance, a strongly prevention-focused CEO would first think of the negative outcomes of such a move, instead of the potential benefits (Wowak and Hambrick, 2010). Thus, prevention-focused people are prudent (Brockner et al, 2004), and are associated with vigilance against any possibilities of mistakes (Lanaj et al, 2012; Forster and Higgins, 1998).

In the context of tax avoidance, prevention-focused people might be concerned on the potential costs of tax avoidance such as regulatory costs. Companies can face a huge amount of fines if caught by the government for being dishonest with its tax returns. They are also subject to a higher frequency of government auditing since the firm is labeled as high-risk targets (Mills, 1998). In addition, tax avoidance can also damage a firm’s reputation. Firms avoiding taxes may face higher costs of debt, and incur significant price discounts from the capital market (Hanlon and Slemrod, 2009; Graham et al., 2013; Hasen et al., 2013). Desai and Dharmapala (2009) argue that the negative reaction from shareholders and debtholders to the news of tax avoidance is because they see such an action as cheating, and they are worried about being deceived by the CEO as well. Seeing all those

negative consequences, a strongly prevention-focused CEO would be more careful about getting involved with aggressive tax planning.

Third, prevention-focused people are more sensitive to negative information (Lanaj et al, 2012), so a prevention-focused CEO would be more concerned about the dark side of proposals. A prevention-focused CEO may enlarges the influence of the risks mentioned before, and make it more difficult to agree on the decision to avoid tax. Thus, a strongly prevention-focused CEO would try to avoid tax only when there are sufficient proofs that their investment in managing tax burden can be fully recovered.

Based on the reasons above, I develop the following hypothesis:

H1b: CEOs who are strongly prevention-focused exhibit lower tax avoidance than others.

4. Research Design

4.1 Proxies for Tax Avoidance

According to Hanlon and Heitzman (2010), tax avoidance could be any actions contributing to “the reduction of explicit taxes”, which can be broadly adapted to strategies or planed transactions that practically reduce tax burden. Following Desai and Dharmapala (2006), Desai and Dharmapala (2009) and Chen et al. (2010), I use effective tax rate model.

4.1.1 GAAP Effective Tax Rate (GAAP ETR)

I begin with *GAAP ETR* as my measure of tax avoidance, which is widely used in numerous studies (Dyreng et al., 2008; Hope et al., 2013; Wilson, 2009; Chen et al., 2010...etc.), it is also required to be disclosed when firms issuing financial statements.



GAAP ETR is calculated by dividing tax expense with pretax income minus special items (Dyreng et al. (2008) adjust pretax income for special items because these items can be so large as to introduce volatility in *ETR* measure. These items includes any nonrecurring charges like restructuring charges, severance pay, or goodwill impairments...etc.;) for firm *i* in year *t*:

$$GAAP_ETR_{it} = \frac{Tax_Expense_{it}}{Pretax_Income_{it}}$$

Developed by Surrey (1973), *GAAP ETR* is a simple tool to compare tax burden between companies: the lower the *ETR* is, the higher the probability of engaging in tax avoidance. The basic idea is that the goal of tax avoidance is to reduce tax liabilities, which can usually be reflected by a reduction in cash expenses and its effective tax rate. But this measure has some weakness (Dyreng et al., 2008).²

4.1.2 Cash Effective Tax Rate (*CETR*)

To better capture tax avoidance, Dyreng et al. (2008) modify the measure by dividing the sum of a firm's total cash taxes paid by the sum of its total pretax income (excluding the effects of special items) and create cash effective tax rate as follows:

² First, it uses only annual data, which make it prone to year-to-year variation due to the annual effective tax rates. It also suffers from undefined effective tax rate due to negative pretax income, which would both decrease the effectiveness of *GAAP ETR* measure. Second, under SFAS No. 109, Accounting for Income Taxes, tax expense is composed of the sum of current tax expense and deferred tax expense. And deferred tax expenses are tax liabilities that would be paid in the future due to temporary book-tax difference. Deferring tax liabilities is also a popular way of avoiding tax. But as *GAAP ETR* cannot identify current tax expenses form deferred tax expenses, *GAAP ETR* cannot be a good measure for this type of tax avoidance. Deductions resulting from employees exercising stock options can also pose threats to the usefulness of *GAAP ETR*. Under GAAP, this kind of deductions would be directly reflected with an increase in equity, rather than a reduction in current tax expenses. This would overstate current tax expenses and hurt the effectiveness of *GAAP ETR*.

$$CASH_ETR = \frac{\sum_{t=1}^N Cash_Tax_Paid_{it}}{\sum_{t=1}^N (Pretax_Income_{it} - Special_Items_{it})}$$



Like traditional *GAAP ETR* measure, Cash Effective Tax Rates (*CETR*) also reflect both temporary and permanent book-tax differences. But by using cash tax paid, instead of *GAAP* tax expenses, there are two significant benefits of this measure. First, it avoids overstating the current tax expenses arising from employee stock options, which usually cause problems to *GAAP ETR* measures. (Because the benefit of tax deduction cannot be reflected to *GAAP* tax expenses) Second, it also avoids tax accrual effects presented in the current tax expense (Hanlon and Heitzman, 2010). To be more specifically, the timing and amount of the recognition of revenue or expenses can be quite different when calculating *GAAP* income and taxable income, this result in many temporary book-tax differences. By replacing *GAAP ETR* measurement with *CETR* measurement, we can effectively avoid this problem, since we only focus on the real amount of cash tax paid. However, *CETR* also suffers from some limitation.³

4.1.3 Long-term Cash Effective Tax Rate (*LT_CETR*)

Following Dyreng et al. (2008), the third *ETR* measure in this study is long-term Effective Tax Rate for the five-year period. To observe tax avoidance from a longer time frame, I divide the sum of a firm's total cash taxes paid over a five-year period by the sum

³ First, only by measuring the cash tax paid cannot distinguish between normal activities that are tax-favored, from other activities intentionally undertaken to reduce taxes (Khurana and Moser, 2010). Also, isolating the accounting elements from our measure can pose new problems for our inability to identify accounting based tax avoidance. Badertscher, Phillips, Pincus, and Rego (2009) argue that the cash effective tax rate is subject to measurement error because it cannot control for nondiscretionary sources of book-tax differences like depreciation. So this measure is believed to be biased downward, especially for firms which tend to manage pretax book income upwards.

of its total pretax income (excluding the effects of special items) over the same five-year period:

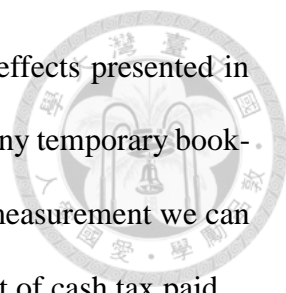
$$LT_CETR = \frac{\sum_{t-4}^t Cash_Tax_Paid_{it}}{\sum_{t-4}^t (Pretax_Income_{it} - Special_Items_{it})}$$



In calculating this *LT_CETR*, I also follow Dyreng, Hanlon, and Maydew (2008) to avoid using an average of *CETRs* from individual years, because that kind of procedure would overweight the influence of outliers. To be clear, if some of my sample years have extremely high or low *CETR*, directly using average of *CETRs* would make my *LT_CETR* measure higher or lower than it should be.

As to the benefits of *LT_CETR*, prior studies argue that using measures adopting only annual tax expenses would suffer from year-to-year variations. Dyreng et al. (2008) argue that cash taxes paid over short time periods is an imperfect measure of avoidance because it includes payments to (and refunds from) the IRS and other tax authorities upon settling of tax disputes that arose years ago. When measured over long time periods, however, the income to which these taxes relate will more likely be included in the same ratio as the taxes.

Although *CETR* have been a quite advance to traditional *ETR* measure, using *CETR* over a longer time period can overcome the irrelevant fluctuation in *CETR* measures due to some disputes with tax authorities that are actually not related to tax planning. Besides, data of cash tax paid can easily be found in supplement of financial statement. And since *LT_CETR* adopts *CETR* as its measure, it maintains the benefits from *CETR*, *LT_CETR* reflects both temporary and permanent book-tax differences. But it avoids overstating the current tax expenses that arise from employee stock options, which usually cause



problems to *GAAP ETR* measures. It as well as avoids tax accrual effects presented in current tax expense (Hanlon and Heitzman, 2010), which result in many temporary book-tax differences. By replacing *GAAP ETR* measurement with *CETR* measurement we can effectively avoid this problem since we only focus on the real amount of cash tax paid.

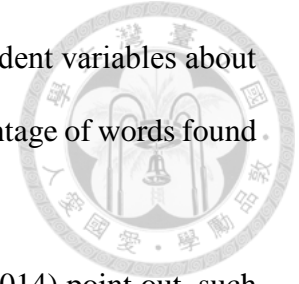
4.2 Proxies for Regulatory Focus

Following Gamache, McNamara, Mannor, and Johnson (2014), I use two independent variables, *Pre* and *Pro*, to capture the influence from regulatory focus. I conduct a content analysis of letters to shareholders of my sample firms. With this kind of analysis, prior studies have successfully captured CEO characteristics like CEO cognition and attention (Eggers and Kaplan, 2009; Kaplan, 2008; Marcel, Barr, and Duhaime, 2011; Nadkarni and Barr, 2008), CEO values (Daly, Poudier, and Kabanoff, 2004), and other psychological characteristics, like their levels of commitment (Sektnan, Michaella, Acock, and Morrison, 2010).

As Gamache et al. (2014) suggest, using content analysis of letters to shareholders, instead of using normal surveys provide us with much convenience in doing long-term comparison between firms, because letters to shareholders are written on yearly and continually basis. To be specific, in this study, the letters to the shareholders are analyzed using the Linguistic Inquiry and Word Count software (LIWC) (Pennebaker, Booth, and Francis, 2007). I also follow the dictionary Gamache et al. (2014) create, to define the promotion-focus-oriented words and prevention-focus-oriented words.

As to Linguistic Inquiry approach, it is a relatively indirect and implicit approach, and is widely adopted in prior studies because this approach can bypass the problem as individuals try to control their perceived traits of regulatory focus (Uhlmann, Leavitt, Menges, Koopman, Howe, and Johnson, 2012), then get clearer measures of regulatory

focus. With the dictionary of such “key words”, I create my independent variables about the strength of prevention focus and promotion focus using the percentage of words found in the letters.



But this way of analysis has its drawbacks; as Gamacheet al. (2014) point out, such letters to shareholders are sometimes written by other staffs, rather than written by CEOs themselves. Which could undermine our ability to measure the regulatory focus of CEOs. But there are still studies suggest that CEO are actually highly involved in the writing of such letters (Duriiau, Reger, and Pfarrer, 2007). Kaplan (2008) also support this point of view, and argue that the legal responsibility which regulate CEOs to be totally honest about the content of letters to shareholders make sure they would at least check the accuracy of the letter beforehand. Which provide confidence for us to trust this analysis to be valid in capturing CEO regulatory focus.

4.3 Baseline Regression Model

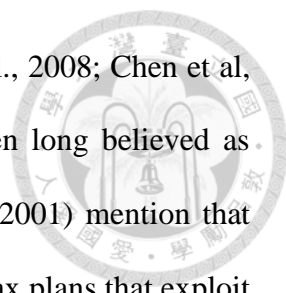
To test my hypothesis, I use the following baseline regression model (1):

$$\begin{aligned}
 AVOID = & \beta_0 + \beta_1 Pre + \beta_2 Pro + \beta_3 Size_MV + \beta_4 MB_{it-1} + \beta_5 Sale_Growth + \beta_6 LEV + \\
 & \beta_7 ROA_{it} + \beta_8 NOL_{it} + \beta_9 Change_NOL_{it} + \beta_{10} Cash + \beta_{11} FI_{it} + \beta_{12} EQINC_{it} + \beta_{13} INTANG_{it} \\
 & + \beta_{14} PPE_{it} + \beta_{15} R\&D + \beta_{16} ADV + \beta_{17} SG\&A + \beta_{18} ABS_DA + \varepsilon_{it}
 \end{aligned} \tag{1}$$

[Insert Table of Variable Definition here]

In model (1), the dependent variable *AVOID* is proxy of tax avoidance, which would be calculated with tax avoidance proxies like *ETR*, *CETR*, and *LT_CETR*, respectively; also *MP_BT D* as additional test. *Pre* and *Pro* are the main independent variable, set to capture the influence of regulatory focus.

As to control variables, I first control firm characteristics such as firm size (*SIZE*), firm growth opportunities (*MB* and *SALE_GROWTH*), and leverage (*LEV*), which are



associated with the level of tax avoidance (Rego, 2003; Dyreng et al., 2008; Chen et al., 2010; Mills, 1998; Graham and Tucker, 2006). Firm size have been long believed as associated with tax avoidance. For example, Manzon and Plesko (2001) mention that large firms have higher ability to more efficiently plan and execute tax plans that exploit tax-advantaged assets, which are used to generate temporary book-tax difference and reduce both taxable income and current tax burden (Scholes, Wolfson, Erickson, Maydew, and Shevlin, 2001). However, they also point out when large firms can exploit tax-planning, their ability may still be limited by their perception that may bring about unwanted political and regulatory scrutiny, which increase the difficulties of avoiding tax burden.

As to the level of leverage, Graham and Tucker (2006) have found a significantly negative relation between leverage and tax avoidance, which is consistent with their hypothesis that tax aggressive firms tend to use leverage as a substitute for other tax sheltering. As firms increase the usage of either one of the two choices to avoid tax, the usage of the other one would decrease.

And for firms with higher growth opportunities, Rego and Wilson (2011) find a positive relation between growth opportunities (measured as market-to-book ratio) and UTB measure, which is consistent with their hypothesis that firms with higher growth opportunities show higher intention in taking risks. (this result is also supported by Rajgopal and Shevlin, 2002; Coles, Daniel, and Naveen, 2006; Cohen, Dey, and Lys, 2009)

The second set of control variables (*ROA*, *NOL*, and ΔNOL) captures firms' profitability and the presence of loss carryforward. Prior studies indicate that more profitable firms tend to have higher effective tax rates (for example, Chen et al., 2010),

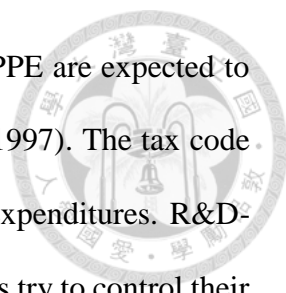
but there are also evidence that firms with high profitability may have more incentives to engage in tax avoidance (Rego, 2003; Wilson, 2009, Gupta and Newberry, 1997). And loss carryforward would, on the other hand, underestimate current tax expenses, because the current tax benefit generated cannot reflect the tax benefits from the carryover in the future.(Manzon and Plesko, 2001).

Firm liquidity (*CASH*) is controlled as saving cash via tax avoidance. Cash savings are usually major concerns for firms. Besides, cash is also necessary for certain types of tax avoidance strategies (McGuire, Omer, and Wang, 2012). Another set of control variables (*FI*, *EQINC*, *INTAN*, *PPE*, *RD*, *ADV*, and *SGA*) captures firms' income sources, asset mix, and expenditures that could impact its *ETRs* and book-tax differences.

Specifically, pretax foreign operation (*FI*), and equity in earnings (*EQINC*) are controlled as the different accounting and tax treatments for foreign income and consolidated earnings accounted for using the equity method. As Dyreng and Lindsey (2009) find a relation between foreign operation and tax avoidance. Firms having at least 1 foreign operation located in tax haven country are with significantly lower tax burden, compared with firms having no foreign operation.

I also control other types of discretionary expenses like the amortization of intangible assets, depreciation expenses from PPE, R&D expenses, advertising expenses, and SG&A expenses, which are all proved to have significant relations to earnings management (Roychowdhury, 2006). Rego and Wilson (2011) argue that those kind of spending can be linked to tax avoidance as they successfully prove that firms that are aggressive in reporting financial results are also more tax aggressive.

To be more specifically, the tax code typically allows corporations to take more depreciation on property, plant, and equipment by depreciate them over periods much



shorter than their economic lives. Thus, firms having high level of PPE are expected to have lower taxable income and lower ETRs (Gupta and Newberry, 1997). The tax code also influence the amortization of intangible assets and the R&D expenditures. R&D-encouraging tax credits would result in higher R&D spending as firms try to control their tax burden (Chen et al., 2010; Grubert and Slemrod, 1998). I also include firms' advertising expense and SG&A expense, since they are both discretionary spending that are proved to be useful for tax aggressive managers (Dyreng et al., 2010).

Besides, as Frank et al. (2009) suggest, earnings quality is negatively associated with tax avoidance, which makes sense since Rego and Wilson (2011) have linked the happening of earnings management and tax avoidance, and earnings quality, which is widely used as proxy of earnings management (Frank et al., 2009). Following this assumption, lower earnings quality should signal the presence of earnings management, and higher possibility to find evidence for tax avoidance. To measure earnings quality, I incorporate absolute value of performance-adjusted abnormal accruals (*ABS_DA*) as the control variable to ensure the association between regulatory focus and tax avoidance is not driven by earnings management.

4.4 Sample and Descriptive Statistics

My initial sample contains firms with complete financial and tax data, it is collected from the Compustat database from 1996 to 2013. Following prior tax avoidance studies, I exclude financial institutions (Standard Industrial Classification (SIC) coded from 6000 to 6999) and utilities (SIC coded from 4900-4949) from the sample, as the models used to estimate discretionary accruals are not applicable to firms in these industries (Frank et al. 2009). In addition, in both the main and additional analyses, I exclude firm-year observations missing necessary financial accounting data from Compustat database.

Following Chen et al. (2010), I also exclude observations with total assets less than \$1 million as to avoid small deflator problem.

About my sample of CEO regulatory focus, I use shareholder letters from official websites of my sample firms. I merge the CEO regulatory focus data with the financial and tax data mentioned before. After removing firms with incomplete information, my final sample has 4,097 firm-year observations over 2002-2011. The sample period of the supplemental sample used for additional analyses is also reduced to year 2002 to 2011 due to data availability.

Table 1 shows the descriptive statistics for all the variables used in the models, which would be demonstrate in the research design. The mean value of *ETR*, *CETR*, *LT_CETR* are 0.276, 0.247, and 0.252, respectively; which are all reasonable compared to prior studies. The mean value for *MP_BT D* is 0.003, which have no big difference as compared with other studies. The mean value of Prevention focus Score is 0.0013, and the mean value of Promotion focus score is 0.0054. Other sample firm-year statistics are also in the reasonable range, just similar to the statistics reported in earlier studies.

Table 2 provides correlation for all the variables mentioned in table 1. As expected, there exist correlation between many different tax avoidance measures, especially between two effective tax rate measures like *LT_CETR* and *ETR*. The correlation is reasonable, since many of them share key elements in calculation, such as the difference between financial income and taxable income. But I do not perceive any significant correlation between prevention focus score and other tax avoidance measures. As to other control variable, it's not surprising to see most of them are slightly correlated to tax avoidance measures.

[Insert Table 1 here]

[Insert Table 2 here]

5. Empirical results

5.1 Results of Estimating Model (1) with ETR, CETR, LT_CETR as Tax Avoidance

Proxies

Table 3 presents the results of the model (1) using ordinary least squares (OLS) regressions, I use the prevention focus scores and the promotion focus scores as the independent variable, and effective tax rate (*ETR*), cash effective tax rate (*CETR*), long-term cash effective tax rate (*LT_CETR*) as dependent variables in column 1, column 2, and column3, respectively.

Column 1 results show no significant relation between prevention focus and tax aggressiveness as I use effective tax rate as measure of tax avoidance; but there are significantly negative relation between promotion focus and effective tax rate at the 10% level. Every 1% increase of promotion focus score reduces 1.211% of effective tax rate. In Column 2, the coefficient on the prevention focus is still insignificant when I use *CETR* as the measure of tax avoidance. And as to the coefficient of promotion focus, there is a significantly negative relation between promotion focus and *CETR* at the 5% level. Every 1% increase in promotion focus score reduces 0.211% of cash effective tax rate. In column 3, the result is consistent with previous two measures, there is no significant result as I use *LT_CETR* as proxy of tax avoidance and try to find relation between tax aggressiveness and prevention focus. And as I look at promotion focus measure, it is also significantly negatively associated with *LT_CETR* at 5% level, the coefficient of promotion focus is -0.277 Overall, these results show that firms with strongly promotion focused CEO are associated with higher level of tax avoidance after controlling for firm characteristics effects.



The coefficients on the control variables are generally consistent with those reported in the prior studies (e.g., Chen et al. 2010; Hope et al. 2013; Hoi et al. 2013; Rego, 2003; Wilson, 2009)). Large firms, those with high level of leverage, NOL, cash holdings, and spending which is under management discretion (such as PPE, SG&A, and R&D spending) are negatively associated with tax avoidance measures, as well as higher probabilities of avoiding taxes.

Overall, these results from the regressions using effective tax rate as measure of tax aggressiveness show that firms with strongly promotion focused CEOs are associated with higher levels of tax avoidance, compared with firms managed by strongly prevention-focused CEOs. These results are partially supportive of our hypothesis since I cannot find evidence that there is any relation between prevention focus and tax avoidance.

[Insert Table 3 here]

6. Additional Analyses: Book-Tax Difference

I also adopt another measure for book-tax differences as a measure for tax avoidance. Traditional Book-tax difference (which would be used as variable *MP_BT*) is developed by Manzon-Plesko (2001), who study into the difference between financial income and taxable income, to observe the manipulation in tax burden.

$$MP_BT = \frac{(Accounting\ income - Taxable\ income - Income\ tax\ expense - Equity\ in\ earnings)}{Lagged\ total\ assets}$$

They argue that managers have incentives to increase accounting income reported to shareholders and minimize tax liabilities through lowering taxable income as well (Shackelford and Shevlin, 2000). They also suggest two major sources of book-tax differences. First, tax and financial reporting rules may allow for differences in the timing of revenue and expense recognition. Second, there are numerous differences in the

recognition of revenue or expense, some of them would be recognized under one system, but not the other.

The basic idea of the calculation is to estimate the difference of US accounting income and US taxable income. To better capture the amount of tax planning, they deduct expenses which are deductible (for example, current state tax expenses, other income tax expenses), or income that can be excluded (for example, equity in income from non-consolidated subsidiaries), when calculating taxable income. As they suggest, this method has some limitation.⁴

As the detailed tax returns are confidential for firms, I follow their steps and estimate the taxable income from dividing tax expenses by statutory tax rate (since tax expense is the result of multiplying taxable income by tax rate)

Table 4 presents the results of the baseline model (1) using ordinary least squares (OLS) regressions as I use book-tax difference as measure of tax avoidance. I use the prevention focus scores and the promotion focus scores as the independent variable; and book-tax difference (*MP_BT*D) as dependent variables.

The results show a slightly significantly negative relation between prevention focus and tax aggressiveness as I use *MP_BT*D as measure of tax avoidance at 10% level, each 1% increase in prevention focus score reduce *MP_BT*D by 0.357%; besides, there also exists significantly positive relation between promotion focus and *MP_BT*D at the 5% level, every 1% increase of promotion focus score increases 0.815% of *MP_BT*D.

Like the result from the previous regression, the coefficients on the control variables

⁴ First, the taxable income would be affected by operating loss carryforward and consolidated practices. Second, it exclude the influence from non-qualified stock compensation from both financial income and taxable income, so there is no way we can observe its influence. Third, the repatriation of foreign income under the FTC (Foreign Tax Credit) bindings would also reduce the amount of taxable income and enlarge the difference in our calculation.

are generally consistent with those reported in prior studies (e.g., Chen et al. 2010; Hope et al. 2013; Rego, 2003; Wilson, 2009), since I only change the dependent variables here. Large firms, those with high level of leverage, NOL, cash holdings, and discretionary spending (PPE, SG&A, and R&D spending, for example) are negatively associated with tax avoidance measures, showing more probabilities of avoiding taxes.

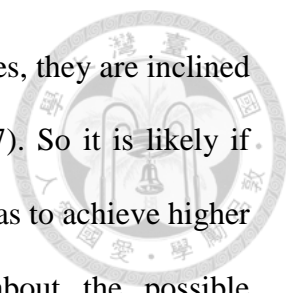
Overall, the results from the regressions using book-tax difference as measures of tax aggressiveness show that firms with strongly promotion focused CEOs are associated with higher levels of tax avoidance, as compared with firms managed by strongly prevention-focused CEOs. Firms with strongly prevention-focused CEOs, on the other hand, show a slight relation to “increase” their tax burden. These results are supportive of our hypothesis since I find the significant difference between the levels of tax avoidance from firms with CEOs having different regulatory focuses.

[Insert Table 4 here]

7. Conclusion

I examine the relation between CEO regulatory focus and corporate tax avoidance. Although strongly promotion-focused people are found to be more aggressive in achieving high performance and pay less attention to related risks (especially when being compared with strongly prevention-focused people), but tax avoidance is not completely a performance-enhancing strategy. Therefore, it is worth further attention to see if a strongly promotion-focused CEO would act significantly different from a strongly prevention-focused CEO when they make decisions about getting involved with tax avoidance.

Strongly promotion-focused people are more eager to maximize gains and minimize non-gains (Cesario et al., 2008). They tend to positively evaluate situations, and more



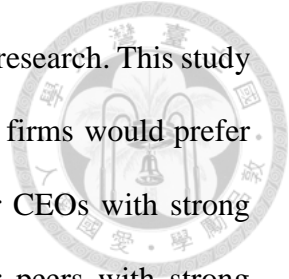
likely see things as opportunities than others (Higgins, 1998). Besides, they are inclined to take advantages of any opportunities (Crowe and Higgins, 1997). So it is likely if CEOs who are strongly promotion-focused tend to avoid tax burden as to achieve higher performance and personal interests, without further concern about the possible consequences attached.

CEOs having strong prevention focus, on the other hand, is motivated by ought, responsibility and sense of security. They see accuracy as the priority in every move they made, and make much efforts to prevent errors of commission or mismatches by ensuring “hits” (Crowe & Higgins, 1997). They also tend to put more weight on related risks when evaluating situations (Higgins and Spiehel, 2004). So I argue that a strongly promotion-focused CEO would act differently about avoiding tax compared with a strongly prevention-focused CEO.

I find that firms with strongly promotion-focused managers are associated with significantly higher level of tax avoidance while strongly prevention-focused CEOs do not show any significant relation to tax avoidance, after controlling for firm characteristics. The results are consistent with my hypothesis that strongly promotion-focused CEOs would show significantly higher level of tax avoidance when compared with strongly prevention-focused CEOs

My study makes several contributions to prior tax and psychology literatures in various ways. First, I extend prior works of Dryeng by going beyond traditional demographic CEO characteristics and introduce regulatory focus theory as my psychological measure of CEO characteristics, to further examine tax avoidance from a brand new angle. Second, I provide strong evidence regarding the role of CEO characteristics in corporate decisions, by showing how CEO psychological characteristics

influence corporate tax avoidance, which opens a new area for future research. This study also leaves several new lines of inquiry, including whether different firms would prefer to choose CEOs with certain type of regulatory focus? Or whether CEOs with strong promotion focus would show higher managerial ability than their peers with strong prevention focus? I leave those questions for future research. In conclusion, my findings have important public policy implications.





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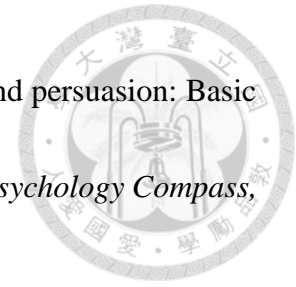
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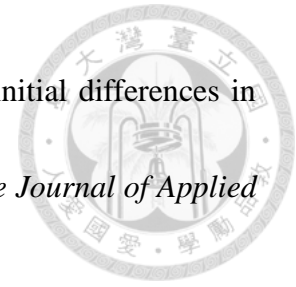
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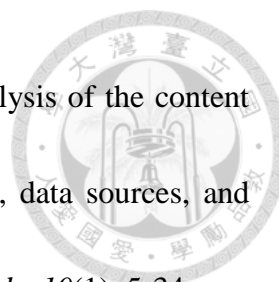
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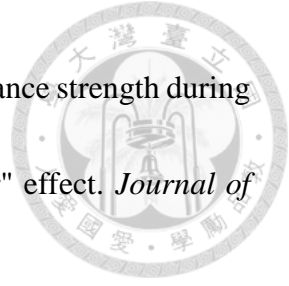
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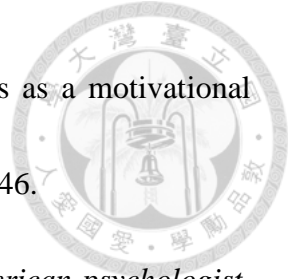
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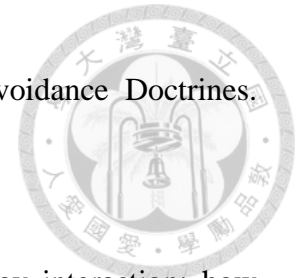
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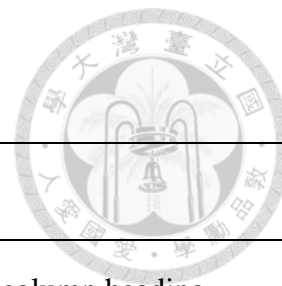
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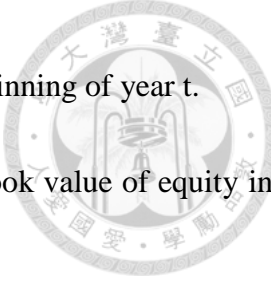
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Appendix : Variable Definition



Variable	Definition
<i>AVOID</i>	= <i>ETR, CETR, LT_CETR, MP_BT D</i> , indicated by column heading.
<i>GAAP_ETR</i>	= Effective tax rate, the ratio of total tax expenses over pretax income, adjusted for special items.
<i>CETR</i>	= Cash effective tax rate is cash taxes paid divided by pre-tax book income adjusted for special items.
<i>LT_CETR</i>	= Five-year-average cash taxes paid divided by five-year-average pre-tax book income after adjusting for special items.
<i>MP_BT D</i>	= Manzon-Plesko book-tax difference, calculated as (U.S. domestic accounting income-U.S. domestic taxable income- state income tax expense –other income tax expense – equity in earnings) / lagged total assets.
<i>Pre</i>	= Proxy variable of the strength of prevention focus, created by using the percentage of prevention-focus-oriented words (Gamacheet al., 2014) recognized in our letters to shareholders.
<i>Pro</i>	= Proxy variable of the strength of prevention focus, created by using the percentage of promotion-focus-oriented words (Gamacheet al., 2014) recognized in our letters to shareholders.

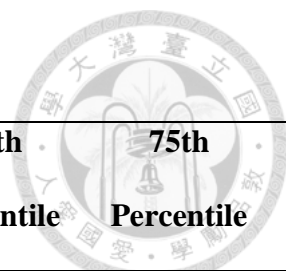


<i>Size_MV</i>	=	The natural logarithm of market value in the beginning of year t.
<i>MB</i>	=	The ratio of the market value of equity to the book value of equity in the beginning of year t.
<i>Sale_Growth</i>	=	The change in sales revenue, scaled by the lagged sales.
<i>LEV</i>	=	The ratio of long-term debts to lagged total assets.
<i>ROA</i>	=	The ratio of operating income to lagged total assets.
<i>NOL</i>	=	An indicator variable, which is coded as one if this firm has loss carryforward at the beginning of the year t, zero otherwise.
<i>Change_NOL</i>	=	The change in loss carryforward in year t, which is scaled by the total assets at the beginning of the year.
<i>Cash</i>	=	Cash and cash equivalents in current year, divided by beginning of the year total assets.
<i>FI</i>	=	The pretax foreign income in year t, scaled by the total assets at the beginning of the year.
<i>EQINC</i>	=	The equity income in earnings (ESUB) in year t, scaled by the total assets at the beginning of the year.
<i>INTANG</i>	=	Intangible assets in current year, divided by total assets at the beginning of the year.



<i>PPE</i>	=	The property, plant, and equipment in year t, scaled by the total assets at the beginning of the year.
<i>R&D</i>	=	Total research and development expense divided by total assets at the beginning of the year.
<i>ADV</i>	=	Advertising expense in year t, divided by net sale in year t.
<i>SG&A</i>	=	Selling, general & administrative expenses divided by beginning of year total assets
<i>ABS_DA</i>	=	The absolute value of discretionary accruals for firm i in year t, where discretionary accruals are based on the performance matched modified Jones model.

Table 1 Descriptive Statistics



Variable	n	Mean	Std. Dev.	25th Percentile	50th Percentile	75th Percentile
<i>GAAP_ETR</i>	3693	0.276	0.143	0.206	0.296	0.358
<i>CETR</i>	3693	0.247	0.169	0.138	0.240	0.327
<i>LT_CETR</i>	3795	0.252	0.141	0.171	0.249	0.319
<i>MP_BT D</i>	1875	0.003	0.045	-0.013	0.005	0.023
<i>Pre</i>	3901	0.0013	0.0017	0	0.000	0.002
<i>Pro</i>	3901	0.0054	0.003	0.003	0.005	0.007
<i>Size_MV</i>	4097	7.731	1.563	6.625	7.587	8.707
<i>MB</i>	4097	2.372	30.352	1.462	2.254	3.525
<i>Sale_Growth</i>	4097	0.105	0.978	-0.010	0.071	0.158
<i>LEV</i>	4097	0.213	0.251	0.030	0.180	0.302
<i>ROA</i>	4097	0.097	0.123	0.044	0.092	0.150
<i>NOL</i>	4097	0.522	0.500	0.000	1.000	1.000
<i>Change_NOL</i>	4097	0.006	0.184	0.000	0.000	0.002
<i>Cash</i>	4097	0.172	0.185	0.043	0.110	0.238
<i>FI</i>	4097	0.032	0.053	0.000	0.014	0.051
<i>EQINC</i>	4097	0.002	0.010	0.000	0.000	0.000
<i>INTANG</i>	4097	0.245	0.250	0.052	0.187	0.368
<i>PPE</i>	4097	0.292	0.270	0.102	0.203	0.399
<i>R&D</i>	4097	0.033	0.059	0.000	0.006	0.042
<i>ADV</i>	4097	0.013	0.041	0.000	0.000	0.006
<i>SG&A</i>	4097	0.228	0.227	0.087	0.180	0.306

<i>ABS_DA</i>	4097	0.073	0.175	0.020	0.045	0.083
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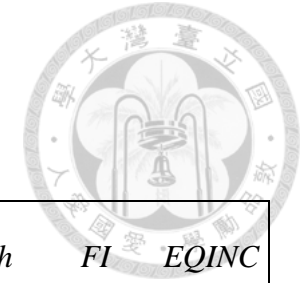
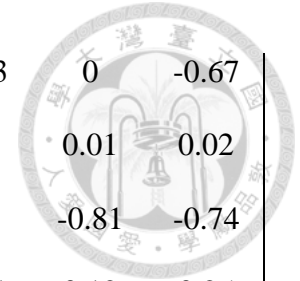
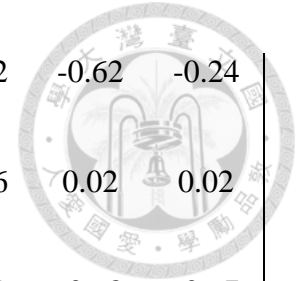


Table 2 Correlation Table

	<i>GAAP_ ETR</i>	<i>CETR</i>	<i>LT_ CETR</i>	<i>MP_ BTD</i>	<i>Pre</i>	<i>Size_MV</i>	<i>MB</i>	<i>Sale_ Growth</i>	<i>LEV</i>	<i>ROA</i>	<i>NOL</i>	<i>Change _NOL</i>	<i>Cash</i>	<i>FI</i>	<i>EQINC</i>
<i>GAAP_ ETR</i>	1	0.45	0.4	0.18	-0.02	-0.07	-0.03	0.05	0.06	0.19	-0.08	-0.02	-0.16	-0.31	0.02
.	.	0	0	0	-0.61	-0.16	-0.57	-0.29	-0.25	0	-0.09	-0.62	0	0	-0.66
<i>CETR</i>	0.2	1	0.59	-0.24	-0.06	0.01	-0.06	-0.06	0.06	-0.06	-0.08	0.13	-0.15	-0.26	-0.04
.	0	.	0	0	-0.2	-0.91	-0.19	-0.26	-0.23	-0.21	-0.1	-0.01	0	0	-0.44
<i>LT_ CETR</i>	0.19	0.47	1	-0.13	-0.06	-0.03	-0.18	-0.2	0.04	-0.09	-0.07	0.07	-0.15	-0.21	-0.03
.	0	0	.	-0.01	-0.2	-0.49	0	0	-0.39	-0.06	-0.13	-0.14	0	0	-0.6
<i>MP_ BTD</i>	0.24	-0.24	-0.12	1	0.04	0.08	0.07	-0.1	0.1	0.2	0.02	-0.1	-0.11	-0.2	0.02

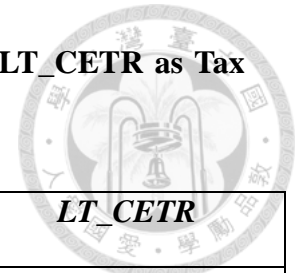


	0	0	-0.01	.	-0.4	-0.11	-0.16	-0.03	-0.04	0	-0.66	-0.03	-0.03	0	-0.67
<i>Pre</i>	0.01	-0.01	0	0.01	1	0.13	0.08	0.07	0.03	0.02	0	0.03	0	0.01	0.02
	-0.9	-0.77	-0.95	-0.77	.	-0.01	-0.08	-0.17	-0.58	-0.69	-1	-0.52	-1	-0.81	-0.74
<i>Size_MV</i>	0	0.02	-0.05	0.05	0.11	1	0.2	-0.13	0.31	0.04	0.18	0.09	-0.31	0.12	0.25
	-0.96	-0.74	-0.3	-0.35	-0.03	.	0	-0.01	0	-0.46	0	-0.06	0	-0.01	0
<i>MB</i>	-0.02	-0.07	-0.1	0.01	0.06	0.05	1	0.18	-0.03	0.54	-0.12	0.04	0.09	0.31	0.1
	-0.7	-0.13	-0.03	-0.77	-0.19	-0.32	.	0	-0.52	0	-0.01	-0.44	-0.06	0	-0.05
<i>Sale_Growth</i>	0.02	-0.11	-0.16	-0.06	0.08	-0.08	0.05	1	-0.09	0.25	-0.04	0.02	0.11	0.21	0.04
	-0.69	-0.02	0	-0.23	-0.12	-0.11	-0.28	.	-0.06	0	-0.41	-0.76	-0.02	0	-0.44
<i>LEV</i>	0.05	0.04	0.02	0.04	0.01	0.19	-0.1	0.05	1	-0.13	0.07	0	-0.47	-0.13	0.13
	-0.31	-0.38	-0.62	-0.41	-0.76	0	-0.03	-0.27	.	-0.01	-0.16	-0.95	0	-0.01	-0.01
<i>ROA</i>	0.28	-0.19	-0.11	0.44	0	0.02	0.05	0.19	-0.02	1	-0.23	-0.03	0.27	0.47	0.12
	0	0	-0.02	0	-0.99	-0.63	-0.32	0	-0.63	.	0	-0.54	0	0	-0.01
<i>NOL</i>	-0.05	-0.05	-0.06	0.03	0.01	0.17	-0.01	0.03	0.04	-0.19	1	-0.05	0.02	0.02	-0.06



	-0.28	-0.29	-0.19	-0.51	-0.86	0	-0.77	-0.57	-0.42	0	.	-0.31	-0.62	-0.62	-0.24
<i>Change_</i>	-0.03	0.13	0.06	-0.11	0.09	0.02	0.01	0	-0.02	-0.05	-0.02	1	-0.06	0.02	0.02
<i>NOL</i>															
	-0.51	-0.01	-0.21	-0.03	-0.07	-0.74	-0.84	-0.93	-0.61	-0.27	-0.69	.	-0.19	-0.68	-0.67
<i>Cash</i>	-0.16	-0.18	-0.21	-0.03	0	-0.36	0.05	0.08	-0.21	0.29	-0.06	0.04	1	0.34	-0.18
	0	0	0	-0.48	-0.96	0	-0.29	-0.12	0	0	-0.19	-0.44	.	0	0
<i>FI</i>	-0.1	-0.23	-0.16	-0.03	0.01	0.11	0.09	0.16	-0.12	0.59	-0.02	-0.01	0.32	1	0.12
	-0.05	0	0	-0.58	-0.82	-0.02	-0.06	0	-0.01	0	-0.7	-0.82	0	.	-0.02
<i>EQINC</i>	-0.08	-0.07	-0.06	0.02	-0.06	0.14	0.02	0.01	0.06	0.09	0	-0.04	-0.12	0.09	1
	-0.12	-0.15	-0.2	-0.61	-0.2	0	-0.73	-0.79	-0.25	-0.06	-0.93	-0.47	-0.01	-0.07	.

Table 3 Results of Estimating Model (1), Using ETR, CETR, LT_CETR as Tax Avoidance Proxies



Variables	GAAP_ETR	CETR	LT_CETR
<i>Intercept</i>	0.333 (20.87) ^{***}	0.317 (15.76) ^{***}	0.362 (22.43) ^{***}
<i>Pre</i>	-0.288 (-0.22)	1.890 (1.14)	-0.295 (-0.22)
<i>Pro</i>	-1.211 (-1.92) [*]	-0.221 (-2.15) ^{**}	-0.277 (-2.11) ^{**}
<i>Size_MV</i>	-0.005 (-3.15) ^{**}	-0.000 (-0.23)	-0.007 (-4.19) ^{***}
<i>MB</i>	0.000 (0.69)	0.000 (0.77)	0.000 (1.17)
<i>Sale_Growth</i>	-0.004 (-1.52)	-0.005 (-1.73)	0.012 (4.74) ^{***}
<i>LEV</i>	-0.035 (-3.56) ^{***}	-0.042 (-3.39) ^{***}	-0.020 (-1.94)
<i>ROA</i>	0.508 (18.75) ^{***}	0.040 (1.16)	-0.029 (-1.11)
<i>NOL</i>	-0.013 (-2.91) ^{**}	-0.031 (-5.38) ^{***}	-0.019 (-4.02) ^{***}
<i>Change_NOL</i>	-0.024 (-1.45)	0.007 (0.33)	0.169 (5.21) ^{***}
<i>Cash</i>	-0.065	-0.068	-0.082

	(-4.03) ^{***}	(-3.35) ^{***}	(-4.81) ^{***}
<i>FI</i>	-0.512	-0.166	-0.042
	(-10.63) ^{***}	(-2.74) ^{**}	(-0.85)
<i>EQINC</i>	-0.836	-0.851	-0.456
	(-3.59) ^{***}	(-2.89) ^{**}	(-1.56)
<i>INTANG</i>	0.001	-0.009	-0.031
	(0.10)	(-0.73)	(-2.98) ^{**}
<i>PPE</i>	0.001	-0.073	-0.069
	(0.15)	(-5.82) ^{***}	(-6.73) ^{***}
<i>R&D</i>	-0.503	-0.425	-0.276
	(-8.90) ^{***}	(-5.95) ^{***}	(-4.76) ^{***}
<i>ADV</i>	0.028	0.169	0.171
	(0.45)	(2.17) [*]	(2.69) ^{**}
<i>SG&A</i>	-0.035	0.041	0.047
	(-2.83) ^{**}	(2.58) ^{**}	(3.61) ^{***}
<i>ABS_DA</i>	0.013	0.020	-0.008
	(0.97)	(1.13)	(-0.65)
N	3522	3522	3622
adj. R ²	0.158	0.056	0.066

***, **, * Significantly different from zero at p-value <0.01, <0.05, <0.10 using a two-tailed test.

Table 4 Results of Estimating Model (1), Using MP_BT D as Tax Avoidance Proxies



Variables	MP_BT D
<i>Intercept</i>	-0.015 (-2.04)*
<i>Pre</i>	-0.357 (-1.68)*
<i>Pro</i>	0.815 (2.56)**
<i>Size_MV</i>	0.001 (1.58)
<i>MB</i>	-0.000 (-3.01)**
<i>Sale_Growth</i>	0.000 (0.04)
<i>LEV</i>	0.011 (2.00)*
<i>ROA</i>	0.309 (28.04)***
<i>NOL</i>	0.009 (4.72)***
<i>Change_NOL</i>	-0.058 (-3.92)***

<i>Cash</i>	-0.012 (-1.82)
<i>FI</i>	-0.327 (-16.53) ^{***}
<i>EQINC</i>	-0.774 (-6.02) ^{***}
<i>INTANG</i>	-0.013 (-3.18) ^{**}
<i>PPE</i>	0.006 (1.26)
<i>R&D</i>	-0.024 (-1.06)
<i>ADV</i>	-0.119 (-4.04) ^{***}
<i>SG&A</i>	-0.022 (-3.04) ^{**}
<i>ABS_DA</i>	-0.015 (-3.55) ^{***}
N	1780
adj. R ²	0.348



***, **, * Significantly different from zero at p-value <0.01, <0.05, <0.10 using a two-tailed test.s