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The effect of Confucian culture on corporate tax avoidance: evidence from China

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ABSTRACT

This study investigates whether Confucian culture can influence corporate tax avoidance. We measure Confucianism using geographical-proximity based method and opt ordinary least square regression considering a sample of Chinese firms during 2004–2016. We find strong evidence that Confucian culture and tax avoidance are negatively associated and this association is less prominent for state-owned firms. Additional analysis shows that tax enforcement efforts mitigate the effect of Confucianism on tax avoidance. The results are consistent and robust to alternative measures of tax avoidance and Confucianism. Overall, the findings enrich our understanding that Confucian culture reduces tax avoidance by promoting corporate ethical behavior.

1. Introduction

Tax avoidance is defined as 'the reduction of explicit taxes' (Hanlon & Heitzman, 2010).[1] In recent years, there has been extensive research on factors determining corporate tax avoidance. One stream of literature suggests that agency problems can lead to corporate tax avoidance (Desai & Dharmapala, 2006, 2009; Desai et al., 2007). Specifically, studies argue that corporate insiders (managers) use complex corporate strategies to avoid taxes and shift organizational resources to pursue private benefits, thereby expropriating stakeholders. Studies have identified various formal governance mechanisms that can curb tax avoidance behavior (Armstrong et al., 2015; Desai & Dharmapala, 2006; Khurana & Moser, 2013; Xu et al., 2011). However, in emerging economies, for example, China, the formal mechanisms are less influential to alleviate unethical practices (Du, 2015; Jebran, Chen, & Tauni, 2019). Therefore, studies are recognizing that informal institutions (culture, religion, social norms, etc.,) can supplement standard governance systems and lessen unethical corporate practices (Boone et al., 2013; Xia et al., 2017). In this study, we examine whether and how Confucian culture can alleviate tax avoidance behavior in China.

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The influence of Confucian philosophy on China has remained for thousands of years (Du, 2015; Yao, 2000). Confucianism not only influences people's behavior but also plays an influential role in determining corporate decisions (Chan, 2007; Chen, Ye, et al., 2019; Dollinger, 1988; Du, 2015, 2016). We argue that Confucian culture can alleviate agency issues and consequently tax avoidance for at least two reasons. First, although China is the largest emerging economy, the corporate governance practices are still weak and under construction. It is well documented in the literature that managers easily extract private benefits due to the weak formal institutional environment (Allen et al., 2005; Cao et al., 2016; Du, 2015; Xia et al., 2017). Therefore, studies have identified that when formal systems are weak, informal institutions (religion, social trust, culture) can play a supplementary role in mitigating unethical corporate practices (Chen, Cai, et al., 2019; Du, 2013; Richardson, 2008; Xia et al., 2017). Thus, we expect that as an informal philosophy, Confucian culture can influence tax avoidance behavior. Second, recent studies (Chen, Ye, et al., 2019; Du 2015; Jebran, Chen, Ye, et al., 2019) have suggested that Confucian philosophy promotes ethical behavior and alleviates agency issues in Chinese enterprises. Therefore, it is argued that Confucian culture can also lessen one of unethical corporate practices, such as tax avoidance.

We further argue that tax enforcement efforts can moderate the relationship between Confucian culture and tax avoidance. It is because studies suggest that informal systems are less influential in influencing corporate decisions when formal mechanisms are prominent (Chen, Ye, et al., 2019; Du, 2015; Jebran, Chen, Ye, et al., 2019; Xia et al., 2017). Chinese firms are known to have a distinct feature which is the nature of enterprise, i.e., state-owned enterprises (SOEs) and non-SOEs. Du (2015) argues that the influence of Confucian culture varies across SOEs and non-SOEs. Therefore, this study also explores whether the influence of Confucian culture on tax avoidance varies across different types of firms.

This study offers several important contributions. First, to the best of our knowledge, this is the first study to investigate the effect of Confucian culture on tax avoidance. Several studies show that Confucian philosophy influences corporate decisions, such as over-investment contemporary business ethics, gender diversity on board, and minority shareholders expropriation, (Chan, 2007; Chen, Ye, et al., 2019; Du, 2015, 2016). However, there is no research on whether Confucianism influences tax avoidance. This study also provides support to studies (Licht et al., 2005; Stulz & Williamson, 2003) that suggest that culture influences corporate behavior.

Second, this study contributes to literature that seeks to identify factors alleviating tax avoidance behavior. Although most of the studies focus on formal mechanisms, only a few studies (Boone et al., 2013; Xia et al., 2017) investigate whether informal system is associated with tax avoidance behavior. We contribute to this literature by illustrating that Confucian culture is an important determinant of tax avoidance in the Chinese context, where formal mechanisms are still under construction, and less influential in reducing tax avoidance incidences.

Third, this study supports the views of ethics literature by elaborating that informal institutions lessen unethical practices in corporations, i.e., tax avoidance, in

which corporate insiders seek personal benefits under the shade of tax avoidance. Specifically, our findings provide support the views of the studies that indicate the influence of informal institutions on tax avoidance (Boone et al., 2013; Xia et al., 2017).

Finally, the results show that the influence of Confucian culture on tax avoidance is less likely for SOEs compared to other types of companies. The findings contribute to literature that shows that the nature of ownership is a distinct attribute of Chinese firms (Beladi et al., 2018; Du, 2015; Khan et al., 2019; Xia et al., 2017; Xu et al., 2011).

This paper proceeds as follows. Section two presents the theory and hypothesis development. Section three describes the data, variables measurement and model. Section four presents the empirical results. Section five concludes.

2. Theory and hypothesis development

The prominent theoretical explanation of tax avoidance literature is based on the view that corporate insiders will use complex corporate strategies to avoid taxes and shift organization resources to pursue private benefits (Desai & Dharmapala, 2006, 2009; Desai et al., 2007). The tax avoidance behavior is so complex that the tax-authorities and external auditors are unable to predict, which provides managers the tools, masks, and justification for their opportunistic behavior, such as earnings management, related party transaction, and other resource-diverting activities. The reduction in corporate tax payouts affects several stakeholders (such as shareholders, government, and general public). Therefore, corporate tax avoidance is generally assumed as expropriation of stakeholders.

Several empirical studies have been carried out to identify factors determining tax avoidance behavior and find supportive evidences for the stakeholders theory (e.g., Armstrong et al., 2015; Chen et al., 2010; Hanlon & Heitzman, 2010). While some of the other studies investigated the economic consequences of tax avoidance (e.g., Beladi et al., 2018; Kim, Li, & Zhang, 2011; Martin et al., 2017). Although researchers have paid more attention to formal governance mechanisms, some of the studies have identified that informal institutions are also effective in reducing tax avoidance. Specifically, Boone et al. (2013) assume that a higher level of religiosity can alleviate tax avoidance behavior. Recently, Xia et al. (2017) argue that social trust lessen tax avoidance. We continue this stream of literature by showing how Confucian culture can alleviate tax avoidance.

Confucian philosophy has had an influence on China and East Asia for thousands of years. In Chinese dynasties, majority of the emperors used legalism and Confucianism to establish ruling doctrines (Craig, 1998). Because of the great emphasis on duty and ethics, Confucian philosophy was considered as the mainstream thought by ancient feudal rulers (Du, 2015). While the philosophic views of Confucianism permeates a way of life, often assumed to represent a culture, it has been still given privileged and supplemented over religious philosophies such as Buddhism, Christianity, and Islam, and also on other philosophies such as Capitalism and Marxism (Du, 2015, 2016; Frankel, 2011; Yao, 2000).

The Confucian culture virtues are based on five constants, which are: Yì, Zhì, Lǐ, Rén, and Xìn (Du, 2015; Tan, 1967; Yao, 2000). Rén (humaneness, 仁) focuses on the obligation of humanness and the altruism for others (Tan, 1967). Yì (appropriateness, 义) emphasises that a person should differentiate good from bad behavior and should not consider personal benefits at the expense of others (Du, 2015; Liu, 1998; Tan, 1967). Lǐ (propriety, 礼) covers all aspects of norms and social behavior and guides the people's behavior on ethical behavior (Ames & Rosemont, 2010). Zhì (wisdom in actions and thoughts, 智) connotates wisdom in thoughts and actions (Tan, 1967) and suggests that a person should maintain a balance between short-term and long-term benefits (Lin et al., 2013). Xìn (keeping to one's word, 信) elaborates that one should keep to his/her word (Tan, 1967).

According to the above five constants, we assume that Confucian culture can restrain tax avoidance behavior by enhancing ethical behavior of corporation. For example, according to Xìn, it is assumed that companies strongly influenced by Confucianism will not pursue personal benefits at the expense of stakeholders (Chen, Ye, et al., 2019; Du, 2015). According to Yì, Confucianism emphasises 'the values of JūnZǐ (gentleman, 君子) benefits from Yì' (君子以义为利) and 'the professional ethics of ZhōngXìn (loyalty and honest, 忠信)'. The ethics of JūnZǐ emphasises the right behavior by restraining unethical practices. According to ZhōngXìn, corporations should be honest and committed with stakeholders. As a result, corporate insiders are less likely to perform unethical corporate practices. Hence, corporations are more likely to pay taxes, when they are influenced by Confucian culture.

On the other hand, Confucian culture can also lower tax avoidance by reducing agency conflicts among stakeholders. Stakeholders are groups and individuals who have interest in the activities and outcomes of an organization and on whom the organizations rely to achieve their objectives, such as customers, suppliers, shareholders, the government, and so on (Freeman et al., 2007). According to the stakeholder theory, corporations need to provide more value to stakeholders so as to get more valuable information and resources (Harrison et al., 2010). The philosophy of Confucian culture coincides with the stakeholder theory. For example, according to Rén, Confucianism contends that 'the benevolent loves others' (仁者爱人) emphasizing the importance of loving others in the society. People influenced by the Confucianism not only care for their own interests but also for others. As a result, in the decision-making process, corporations will pay more attention to the interests of stakeholders by being more social responsible, such as by paying taxes. Similarity, according to Zhì, it is expected that corporations have a lower probability to seek short-term benefits (for their own benefits), which further lowers the chances for stakeholder expropriation (Chen, Ye, et al., 2019).

Finally, we reason that when a company is influenced by Confucianism, they are more likely to follow ethical practices. According to Lǐ, corporate insiders are less likely to involve in unethical practices, like tax avoidance. Confucianism, as implicit moral norms and ethical principles (e.g., trustworthiness and righteousness) will form a strong moral constraint on corporate unethical behavior, and will reduce corporate tax avoidance, which is assumed to be an unethical practice. Because deviation from social norms can have a higher intrinsic cost (Chen, Cai, et al., 2019), therefore,

companies in strong Confucianism environment are more trustworthy and have a lower likelihood of unethical behavior (Jebran, Chen, Ye, et al., 2019), which may further decrease the probability of their unethical corporate practices, such as tax avoidance. Based on the above discussions, we develop the following hypothesis:

Hypothesis 1. Confucian culture is negatively associated with corporate tax avoidance.

The agency problems can be alleviated by strong corporate governance mechanisms (Jensen & Meckling, 1976). Several studies show tax avoidance incentives can be alleviated by various governance mechanisms, such as, high-powered incentives (Desai & Dharmapala, 2006), institutional investors (Khurana & Moser, 2013), board independence and financial sophistication (Armstrong et al., 2015), tax enforcement efforts (Xu et al., 2011). The extant literature suggests that informal systems is less influential when formal governance is stronger (Chen, Ye, et al., 2019; Du, 2015; Jebran, Chen, Ye, et al., 2019; Pevzner et al., 2015; Xia et al., 2017). Therefore, we further test the association between tax avoidance and Confucianism in the presence of strong formal systems.

Studies show that formal and informal institutions are imperfect substitutes from the corporate behavior perspective. For example, Xia et al. (2017) find that the influence of trust on tax avoidance is weaker when internal and external governance mechanisms are weak. Xu et al. (2011) documented that tax enforcement efforts, as formal mechanism, curbs two kinds of agency problems: managers and shareholders and between block-holders and minority investors. Thus, it is expected that tax enforcement efforts, as a formal mechanism, can moderate the association between tax avoidance and Confucianism. We argue that the effect of Confucianism on tax avoidance is weaker in regions where formal mechanisms are stronger. Thus, we hypothesise that:

Hypothesis 2. Tax enforcement efforts attenuate the negative effect of Confucian culture on tax avoidance.

Finally, we hypothesise that the effect of Confucianism on tax avoidance is less prominent for SOEs compared to other firms. Studies suggest that the tax avoidance behavior is lower in SOEs compared to private firms. For example, Bradshaw et al. (2016) argue that executives in SOEs exhibit less tax avoidance behavior in order to achieve multiple socio-political and personal objectives. Most importantly, the dismissal, appointment, and promotion in SOEs are determined by the government, therefore managers in SOEs pay more taxes, in order to please government and also to achieve their personal objectives (such as promotion) (Bradshaw et al., 2016; Fan et al., 2007). In contrast, managers in private firms have a higher likelihood to engage in tax avoidance activities. It is because their appointment, promotion, and dismissal are determined by shareholders. Since, tax avoidance is likely to benefit shareholders, managers in private companies are likely to pursue tax avoidance practices to please shareholders, in order to achieve personal objectives. Hence, we assume that the effect of Confucian culture on tax avoidance is stronger in private firms because Confucian culture can promote ethical behavior in such firms. In contrast, since the tax avoidance behavior is lower in state-controlled firms, therefore the chance of engaging in

this unethical behavior is lower, and so the incremental role of Confucianism in restraining tax avoidance in SOEs will be also lower.

Further, SOEs are firms having a large governmental ownership (Boisot & Child, 1996). Hence, in the SOEs, the government not only play the role of the stakeholder but also the company's shareholder unlike private firms. Instead of being pleased by tax avoidance, the government as the largest shareholders of the SOEs will take lots of measures to suppress corporate tax avoidance. Such difference in the role of shareholders suggests that the agency conflicts among stakeholders is lower in SOEs and thus, the effect of Confucian culture on tax avoidance is weaker in SOEs. Moreover, compared with private firms, SOEs undertake public governance goals such as promoting local employment, maintaining economic growth, and promoting social stability and so require to pay more attention to local employment and tax incomes (Bai et al., 2009). The natural political connections of SOEs cause their decision-making to be influenced by more government interventions. The government, especially the local government, may implement strong interventions in the operating activities of SOEs in order to achieve their political goals, which promote SOEs to exhibit more tax burden and less tax avoidance as a result (Bradshaw et al., 2016). Thus, the negative association between Confucianism and tax avoidance of SOEs will be weaken by the government intervention. Overall, we assume that the effect of Confucian culture on tax avoidance is weaker in SOEs, compared to private companies. Thus, we hypothesise that:

Hypothesis 3. The negative effect of Confucian culture on tax avoidance is weaker for state-owned firms compared to private firms.

3. Data and methodology

3.1. Data

Our sample initially consisted of all firms listed on Shanghai and Shenzhen Stock Exchanges considering the period 2004–2016.[2] We obtained the accounting and financial data from the China Stock Market and Accounting Research database. After compiling all the data, following prior studies (Chen, Ye, et al., 2019; Du, 2015, 2016; Xia et al., 2017), we drop firm-year observations using the following criteria: (1) data of finance industries because the financial characteristics of this industry is different from others; (2) special treatment firms (ST and PT), because they are under the risk of termination; (3) missing data of variables; (4) H-shares, because these companies are listed in Hong Kong, and (5), B-shares, because they are traded in foreign currencies. To mitigate the influence of outliers, all continuous variables are winsorized at the 1% level at both tails.

3.2. Variables measurement

3.2.1. Measures of tax avoidance

Following prior studies, we use three different measures of tax avoidance because different measures capture different aspects of tax avoidance (Beladi et al., 2018; Cen et al., 2017; Chen et al., 2010; Desai & Dharmapala, 2006; Dyreng et al., 2008; Frank,

Lynch, & Rego, 2009; Hanlon & Heitzman, 2010). The first method is based on the effective tax rate, and the other two methods are based on the book-tax difference. The first measure of tax avoidance is computed as follows:

$$TA\_ETR = Statutory\ tax\ rate - effective\ tax\ rate \tag{1}$$

where *effective tax rate* = tax expenses/income before taxes. A lower value of effective tax rate means a higher tax avoidance. Following Majeed and Yan (2019), we control for statutory tax rate because Chinese firms have considerable heterogeneity in their statutory tax rate. Therefore, we expect a negative coefficient on *TA_ETR*.

Our second measure of tax avoidance is book-tax-difference (*BTD*). A higher book-tax-difference suggests a higher tax avoidance behavior. It is computed as follows:

$$BTD_{i,t} = (BookIncome_{i,t} - TaxableIncome_{i,t})/TotalAssets_{i,t} \tag{2}$$

where $BookIncome_{i,t}$ represents the book income of a firm i at year t; $TaxableIncome_{i,t}$ represents taxable income of a firm i at year t; $TotalAssets_{i,t}$ represents the total assets of a firm i at year t.

Our final measure of tax avoidance is residuals book-tax-difference (*DD_BTD*). A higher value of *DD_BTD* suggests a higher tax avoidance. It is computed from the regression equation as follows:

$$BTD_{i,t} = \beta_1 TA_{i,t} + \mu_{i,t} + \varepsilon_{i,t} \tag{3}$$

where $BTD_{i,t}$ represents book-tax difference of a firm i at year t; $TA_{i,t}$ represents total accruals (measured using the cash flow method, which equals income before extraordinary items minus net cash flow from operating activities, scaled by total assets) of a firm i at year t; $\varepsilon_{i,t}$ represents the residuals, showing the level of tax avoidance.

3.2.2. Measures of Confucianism

Du (2015, 2016) developed geographical-proximity based measure of Confucianism. In this study, we also follow a similar approach to measure Confucianism. We consider this method because it is suitable for a large-scale study and it is difficult to obtain data from all executives. Further, several studies opted a similar geographical method to measure religious-based variables (Chen, Ye, et al., 2019; Du, 2013, 2014; El Ghoul et al., 2012; Jebran, Chen, Ye, et al., 2019).

The geographical-proximity method is based on the distance of seven Confucianism centers from a firm's registered address. In China, there are seven Confucianism centers (namely: Lu, Shu, Luo, Zhedong, Taizhou, Min, and Linchuan), located in different parts of the country. Thus, for validity and reliability, we calculated the geographical distance of seven Confucianism centers from all firms. The specific method is as follows.

First, we obtained locations of seven centers of Confucianism and all firms registered addresses and used 'Google-earth' map to collect respective longitudes and latitudes. Then the distance between Confucianism center 'N' and a firm's address was

measured based on their respective longitudes and latitudes as:

$$\cos\beta = \sin\omega_F \times \sin\omega_C + \cos\omega_F \times \cos\omega_C \times \cos(\mu_F - \mu_C) \tag{4}$$

second, the *arc* length per radian is calculated as:

$$rad = \frac{40075.04}{360^\circ} \times \frac{180^\circ}{\pi} \tag{5}$$

third, geographical information system is followed to compute respective distances between seven Confucianism centers and all firms registered addresses:

$$DIS_i = rad \times \left(\frac{\pi}{2} - \arctan\left(\frac{\cos\beta}{\sqrt{1-\cos^2\beta}}\right)\right) \tag{6}$$

finally, geographical-proximity based Confucianism ($COFM_N$) is calculated:

$$COFM_N = (Max_{DIS}N - DIS_N)/(Max_{DIS}N - Min_{DIS}N) \tag{7}$$

where N denotes seven centers of Confucianism, DIS_N show average geographical distance of a firm from Confucianism center 'N', $Max_{DIS}N$ denotes maximum, and $Min_{DIS}N$ denotes minimum values of DIS_N for all firms.

3.2.3. Measures of moderating variables

3.2.3.1. Tax enforcement efforts (TE). Following Xu et al. (2011), tax enforcement efforts was measured by dividing the actual tax ratio by the estimated as follows:

$$TE = \frac{\frac{T_{i,t}}{Y_{i,t}}}{\left(\frac{\hat{T}_{i,t}}{Y_{i,t}}\right)} \tag{8}$$

$T_{i,t}$ represents the tax revenue of region i in year t, Y_{it} represents the GDP of the region i in year t.

3.2.3.2. Nature of enterprise. For measuring the nature of the enterprise, we use a dummy variable which equals one if the firm is controlled by the state and zero otherwise.

3.3. Model

We apply ordinary least square regression to test the association of tax avoidance and Confucianism:

$$TA = \alpha_0 + \alpha_1 COFM_N + \sum \alpha_i Control + \varepsilon \tag{9}$$

where *TA* represents measures of tax avoidance: *TA_ETR, BTD,* and *DD_BTD*; $COFM_N$ represents geographical based Confucianism variables; and *Control* represents a set of control variables. The control variables include return on assets (*ROA*), firm

Table 1. Descriptive statistics.

Variables	N	Mean	SD	Q1	Median	Q3
TA_ETR	23,902	0.028	0.135	−0.024	0.011	0.084
COFM1	23,929	0.902	0.091	0.876	0.916	0.964
COFM2	23,929	0.874	0.093	0.851	0.887	0.939
COFM3	23,929	0.842	0.095	0.814	0.861	0.916
COFM4	23,929	0.816	0.099	0.778	0.830	0.896
COFM5	23,929	0.794	0.102	0.753	0.806	0.875
COFM6	23,929	0.772	0.105	0.734	0.783	0.856
COFM7	23,929	0.746	0.102	0.713	0.766	0.818
STATE	23,825	0.472	0.499	0	0	1
TE	23,929	0.988	0.193	0.844	0.970	1.079
ROA	23,929	0.039	0.060	0.015	0.037	0.066
LEV	23,929	0.457	0.229	0.284	0.455	0.616
PPE	23,929	0.245	0.177	0.106	0.211	0.353
INTANG	23,929	0.045	0.053	0.012	0.031	0.057
SIZE	23,929	21.76	1.268	20.87	21.61	22.47
CF	23,929	0.051	0.123	−0.001	0.030	0.084
BTM	23,929	0.881	0.842	0.326	0.606	1.129
INV	23,929	0.161	0.149	0.062	0.123	0.205
HNTE	23,929	0.513	0.500	0	1	1

Note. This table reports descriptive statistics. Variables definitions are located in Appendix.
Source. Authors formation.

leverage (*LEV*), gross property plant and equipment (*PPE*), intangible assets (*INTANG*), size of the firm (*SIZE*), change in pretax cash flows (*CF*), book to market ratio (*BTM*), net balance of inventory (*INV*), and whether a firm is high-technology (*HNTE*). We divided *ROA*, *LEV*, *PPE*, *INTANG*, *CF*, and *INV* by total assets. We also control for industry and year. The variables are defined in Appendix.

To test the moderating effect of tax enforcement efforts (*TE*) and nature of ultimate owner (*STATE*), we augment the base model by adding interaction terms:

$$TA = \alpha_0 + \alpha_1 COFM_N + \alpha_2 COFM_N * X + \alpha_3 X + \sum \alpha_i Control + \varepsilon \qquad (10)$$

where *X* represents *TE* or *STATE*, the interaction term i.e., $COFM_N{}^*X$ captures the moderating effect of *TE* or *STATE*, and *Control* represents a set of control variables.

4. Empirical results

4.1. Descriptive statistics

Table 1 reports descriptive statistics. According to results, the mean values of *TA_ETR* is 0.028, which is consistent with those reported by studies in the Chinese context (e.g., Majeed & Yan, 2019). The mean values of Confucianism variables i.e., *COFM1*, *COFM2*, *COFM3*, *COFM4*, *COFM5*, *COFM6*, and *COFM7* are 0.902, 0.874, 0.842, 0.816, 0.794, 0.772, and 0.746 respectively, which tally with those reported by Du (2015). The mean value of tax enforcement efforts (*TE*) is 0.988, which tallies with Xu et al. (2011). The mean values of control variables are consistent with those reported by prior studies in the Chinese context (Beladi et al., 2018; Majeed & Yan, 2019; Mao & Wu, 2019; Xia et al., 2017).

Table 2. Confucian culture and tax avoidance.

Variables	(1) COFM1	(2) COFM2	(3) COFM3	(4) COFM4	(5) COFM5	(6) COFM6	(7) COFM7
$COFM_N$	–0.029***	–0.025**	–0.026**	–0.027***	–0.027***	–0.028***	–0.030***
	(–2.682)	(–2.405)	(–2.527)	(–2.766)	(–2.895)	(–3.073)	(–3.122)
ROA	–0.312***	–0.312***	–0.312***	–0.312***	–0.312***	–0.312***	–0.312***
	(–21.077)	(–21.097)	(–21.090)	(–21.076)	(–21.069)	(–21.063)	(–21.061)
LEV	0.051***	0.051***	0.051***	0.051***	0.051***	0.051***	0.051***
	(9.522)	(9.507)	(9.502)	(9.495)	(9.497)	(9.495)	(9.503)
PPE	0.004	0.004	0.005	0.005	0.005	0.005	0.005
	(0.709)	(0.717)	(0.737)	(0.741)	(0.741)	(0.730)	(0.730)
INTANG	–0.040**	–0.040**	–0.040**	–0.040**	–0.040**	–0.040**	–0.040**
	(–2.044)	(–2.083)	(–2.069)	(–2.069)	(–2.066)	(–2.067)	(–2.048)
SIZE	–0.003***	–0.003***	–0.003***	–0.003***	–0.003***	–0.003***	–0.003***
	(–3.570)	(-3.555)	(–3.557)	(–3.563)	(–3.569)	(–3.575)	(–3.582)
CF	–0.024***	–0.024***	–0.024***	–0.024***	–0.024***	–0.025***	–0.024***
	(–4.335)	(–4.335)	(–4.331)	(–4.338)	(–4.340)	(–4.345)	(–4.338)
BTM	–0.019***	–0.019***	–0.019***	–0.019***	–0.019***	–0.019***	–0.019***
	(–10.415)	(–10.414)	(–10.398)	(–10.389)	(–10.385)	(–10.383)	(–10.378)
INV	–0.124***	–0.124***	–0.124***	–0.124***	–0.124***	–0.124***	–0.124***
	(–14.114)	(–14.110)	(–14.095)	(–14.087)	(–14.090)	(–14.096)	(–14.101)
HNTE	–0.043***	–0.043***	–0.043***	–0.043***	–0.043***	–0.043***	–0.043***
	(–21.331)	(–21.364)	(–21.378)	(–21.396)	(–21.402)	(–21.405)	(–21.402)
Constant	0.282***	0.278***	0.278***	0.278***	0.278***	0.278***	0.279***
	(12.498)	(12.443)	(12.530)	(12.632)	(12.689)	(12.750)	(12.779)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.089	0.089	0.089	0.089	0.089	0.089	0.089
N	23,902	23,902	23,902	23,902	23,902	23,902	23,902

Note. This table provides information about the effect of Confucianism on tax avoidance. The dependent variable is TA_ETR. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm. *** and ** indicate P < 1% and 5%. *Source.* Authors formation.

4.2. Confucianism and tax avoidance

The results of the baseline model on the association between Confucianism and tax avoidance are presented in Table 2. Columns (1)-(7) show that the coefficients on *COFM1, COFM2, COFM3, COFM4, COFM5, COFM6*, and *COFM7* are significantly negative. These results provide support to H1, suggesting that Confucian culture reduces tax avoidance. Further, with regard to economic significance, the coefficients on $COFM_N$ in columns (1)-(7) shows that one standard deviation increase in Confucianism will reduce tax avoidance by approximately 1.95, 1.72, 1.82, 1.98, 2.04, 2.17, and 2.26 (in terms of standard deviation). This corroborates the views that Confucian culture promotes ethical behavior and hence alleviates tax avoidance practices.

The results for control variables, if significant, are consistent with studies (Boone et al., 2013; Bradshaw et al., 2016; Park et al., 2016; Xia et al., 2017). Specifically, we find that the coefficients on *LEV, INTANG, CF, BTM*, and *INV* (*ROA* and *HNTE*) are significantly positive (negative) in all columns.

4.3. Effect of tax enforcement efforts

Table 3 presents the results of the moderating effect of tax enforcement efforts. The negative coefficients of $COFM_N$ suggest that Confucian culture reduce tax avoidance. The interaction coefficients ($COFM_N \times TE$) are positive, that indicates that tax enforcement efforts attenuate the effect of Confucian culture on tax avoidance, thus

Table 3. Effect of tax enforcement efforts.

Variables	(1) COFM1	(2) COFM2	(3) COFM3	(4) COFM4	(5) COFM5	(6) COFM6	(7) COFM7
$COFM_N$	−0.105**	−0.094**	−0.096**	−0.099**	−0.102***	−0.104***	−0.107***
	(−2.337)	(−2.156)	(−2.291)	(−2.446)	(−2.587)	(−2.713)	(−2.737)
$COFM_N \times TE$	0.070*	0.063*	0.065*	0.066*	0.068**	0.070**	0.071**
	(1.767)	(1.650)	(1.756)	(1.860)	(1.980)	(2.072)	(2.071)
TE	−0.060*	−0.0530	−0.052*	−0.051*	−0.051*	−0.051**	−0.051**
	(−1.718)	(−1.607)	(−1.708)	(−1.804)	(−1.918)	(−2.009)	(−2.028)
ROA	−0.311***	−0.312***	−0.312***	−0.311***	−0.311***	−0.311***	−0.311***
	(−21.064)	(−21.083)	(−21.075)	(−21.057)	(−21.050)	(−21.044)	(−21.047)
LEV	0.051***	0.051***	0.051***	0.051***	0.051***	0.051***	0.051***
	(9.474)	(9.462)	(9.458)	(9.450)	(9.453)	(9.453)	(9.467)
PPE	0.005	0.005	0.005	0.005	0.005	0.005	0.005
	(0.773)	(0.777)	(0.809)	(0.821)	(0.826)	(0.814)	(0.810)
INTANG	−0.039**	−0.040**	−0.039**	−0.039**	−0.039**	−0.039**	−0.039**
	(−2.008)	(−2.057)	(−2.039)	(−2.037)	(−2.032)	(−2.033)	(−2.013)
SIZE	−0.003***	−0.003***	−0.003***	−0.003***	−0.003***	−0.003***	−0.003***
	(−3.608)	(−3.589)	(−3.596)	(−3.610)	(−3.621)	(−3.631)	(−3.629)
CF	−0.024***	−0.024***	−0.024***	−0.024***	−0.024***	−0.024***	−0.024***
	(−4.329)	(−4.326)	(−4.321)	(−4.328)	(−4.329)	(−4.334)	(−4.324)
BTM	−0.019***	−0.019***	−0.019***	−0.019***	−0.019***	−0.019***	−0.019***
	(−10.362)	(−10.359)	(−10.335)	(−10.320)	(−10.310)	(−10.303)	(−10.302)
INV	−0.124***	−0.124***	−0.124***	−0.124***	−0.124***	−0.124***	−0.124***
	(−14.082)	(−14.074)	(−14.057)	(−14.046)	(−14.049)	(−14.055)	(−14.067)
HNTE	−0.043***	−0.043***	−0.043***	−0.043***	−0.043***	−0.043***	−0.043***
	(−21.354)	(−21.387)	(−21.420)	(−21.452)	(−21.465)	(−21.469)	(−21.463)
Constant	0.349***	0.337***	0.336***	0.336***	0.336***	0.336***	0.336***
	(7.717)	(7.829)	(8.259)	(8.677)	(9.012)	(9.316)	(9.409)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.089	0.089	0.089	0.089	0.089	0.090	0.090
N	23,902	23,902	23,902	23,902	23,902	23,902	23,902

Note. This table provides information about the moderating effect of tax enforcement efforts. The dependent variable is TA_ETR. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm. ***, **, and * indicate $P < 1\%$, 5%, and 10%.
Source. Authors formation.

supporting H2. These findings illustrate that Confucian culture is less influential when formal mechanisms (tax enforcement efforts) are stronger. These results corroborate with prior studies which show that formal and informal mechanisms are partial substitutes from corporate behavior perspective (Chen, Ye, et al., 2019; Du, 2015; El Ghoul et al., 2012; Jebran, Chen, Ye, et al., 2019; Xia et al., 2017).

4.4. Effect of nature of enterprise

Table 4 presents the results of the moderating effect of the state. Consistent with our findings reported in Table 2, the coefficients on $COFM_N$ are negative, suggesting that Confucian culture lessen tax avoidance. Further, the interaction coefficients ($COFM_N \times STATE$) are positive and significant, that indicates that state-ownership weakens the effect of Confucian culture on tax avoidance. The findings elaborate that the influence of Confucian culture is weaker in SOEs compared to other companies, thus supporting H3. These results lend support to the findings of Du (2015), by showing that Confucian culture is less likely to play its role in Chinese SOEs.

Table 4. Effect of nature of enterprise.

Variables	(1) COFM1	(2) COFM2	(3) COFM3	(4) COFM4	(5) COFM5	(6) COFM6	(7) COFM7
$COFM_N$	−0.043***	−0.045***	−0.040***	−0.039***	−0.038***	−0.038***	−0.040***
	(−2.865)	(−3.093)	(−2.862)	(−2.959)	(−2.947)	(−3.079)	(−3.030)
$COFM_N \times STATE$	0.038*	0.045**	0.037*	0.034*	0.032*	0.032*	0.032*
	(1.813)	(2.209)	(1.851)	(1.825)	(1.750)	(1.792)	(1.700)
STATE	−0.036*	−0.041**	−0.032*	−0.029*	−0.027*	−0.026*	−0.025*
	(−1.856)	(−2.248)	(−1.898)	(−1.875)	(−1.804)	(−1.848)	(−1.757)
ROA	−0.318***	−0.318***	−0.318***	−0.318***	−0.318***	−0.317***	−0.317***
	(−21.658)	(−21.654)	(−21.656)	(−21.646)	(−21.644)	(−21.638)	(−21.636)
LEV	0.053***	0.052***	0.052***	0.052***	0.052***	0.052***	0.052***
	(9.834)	(9.809)	(9.804)	(9.799)	(9.804)	(9.803)	(9.811)
PPE	0.005	0.005	0.005	0.005	0.005	0.005	0.005
	(0.816)	(0.832)	(0.826)	(0.827)	(0.821)	(0.811)	(0.796)
INTANG	−0.042**	−0.043**	−0.042**	−0.042**	−0.042**	−0.042**	−0.042**
	(−2.171)	(−2.216)	(−2.191)	(−2.187)	(−2.183)	(−2.185)	(−2.172)
SIZE	−0.004***	−0.004***	−0.004***	−0.004***	−0.004***	−0.004***	−0.004***
	(−3.819)	(−3.824)	(−3.800)	(−3.796)	(−3.795)	(−3.796)	(−3.801)
CF	−0.025***	−0.025***	−0.025***	−0.025***	−0.025***	−0.025***	−0.025***
	(−4.498)	(−4.499)	(−4.495)	(−4.495)	(−4.501)	(−4.505)	(−4.503)
BTM	−0.018***	−0.018***	−0.018***	−0.018***	−0.018***	−0.018***	−0.018***
	(−9.908)	(−9.894)	(−9.898)	(−9.895)	(−9.896)	(−9.894)	(−9.897)
INV	−0.124***	−0.124***	−0.124***	−0.124***	−0.124***	−0.124***	−0.124***
	(−14.152)	(−14.112)	(−14.107)	(−14.089)	(−14.094)	(−14.098)	(−14.116)
HNTE	−0.044***	−0.044***	−0.044***	−0.044***	−0.044***	−0.044***	−0.044***
	(−21.948)	(−21.896)	(−21.917)	(−21.934)	(−21.939)	(−21.940)	(−21.946)
Constant	0.302***	0.303***	0.297***	0.295***	0.293***	0.293***	0.293***
	(12.225)	(12.473)	(12.468)	(12.614)	(12.675)	(12.777)	(12.763)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.093	0.093	0.093	0.093	0.093	0.093	0.093
N	23,805	23,805	23,805	23,805	23,805	23,805	23,805

Note. This table provides information about the moderating effect of nature of enterprise. The dependent variable is TA_ETR. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm.
***, **, and * indicate $P < 1\%$, 5%, and 10%.
Source. Authors formation.

4.5. Robustness checks

4.5.1. Alternative measure of Confucianism

For robustness check, following Du (2015), another measure of Confucianism was used. A variable $COFM_R$ was created, which is the number of Confucianism centers within a distance of a radius R kilometers ($R = 200, 220, 240, 260, 280, 300$) around a firm's registered address. The results reported in Table 5 provide consistent results by indicating negative coefficients on $COFM_R$, whereas positive coefficients on interaction variables ($COFM_R \times TE$ and $COFM_R \times STATE$). These findings provide supportive evidence to main hypotheses.

4.5.2. Alternative measure of tax avoidance using book-tax difference

To further validate results, we estimate results using book-tax difference (*BTD*). The results are reported in Table 6. Columns (1)-(18) indicate that the coefficients on $COFM_N$ are negative, providing strong support to H1, indicating that Confucian culture alleviates tax avoidance. Further, the coefficients on $COFM_N \times TE$ are positive, lending support to H2, indicating the tax enforcement efforts attenuates the effect of Confucianism and tax avoidance association. Moreover, results show that coefficients

Table 5. Robustness check using alternative proxy of Confucianism.

Variables	(1) R=200	(2) R=220	(3) R=240	(4) R=260	(5) R=280	(6) R=300	(7) R=200	(8) R=220	(9) R=240	(10) R=260	(11) R=280	(12) R=300	(13) R=200	(14) R=220	(15) R=240	(16) R=260	(17) R=280	(18) R=300
$COFM_R$	-0.003** (-2.105)	-0.003*** (-2.748)	-0.003*** (-2.411)	-0.003** (-2.410)	-0.002** (-2.227)	-0.002** (-2.296)	-0.024*** (-2.990)	-0.022*** (-2.963)	-0.015** (-2.092)	-0.011 (-1.548)	-0.013* (-1.918)	-0.009 (-1.351)	-0.005* (-2.891)	-0.007*** (-4.097)	-0.006*** (-4.272)	-0.006*** (-3.998)	-0.005*** (-3.819)	-0.005*** (-3.406)
$COFM_R \times TE$							0.020* (2.656)	0.017* (2.503)	0.011* (1.687)	0.007 (1.141)	0.010 (1.551)	0.006 (0.970)						
$COFM_R \times STATE$													0.005* (1.874)	0.007*** (2.817)	0.008*** (3.437)	0.007*** (3.085)	0.007*** (2.962)	0.005** (2.501)
STATE													-0.003 (-1.455)	-0.005** (-2.012)	-0.006** (-2.384)	-0.005** (-2.228)	-0.005** (-2.193)	-0.005** (-1.983)
TE							-0.003 (-0.464)	-0.002 (-0.268)	0.000 (-0.066)	0.001 (0.140)	-0.001 (-0.127)	0.001 (0.127)						
ROA	-0.313*** (-21.181)	-0.313*** (-21.173)	-0.313*** (-21.171)	-0.313*** (-21.178)	-0.313*** (-21.173)	-0.313*** (-21.141)	-0.312*** (-21.127)	-0.312*** (-21.122)	-0.312*** (-21.139)	-0.313*** (-21.153)	-0.312*** (-21.143)	-0.312*** (-21.112)	-0.319*** (-21.728)	-0.319*** (-21.723)	-0.319*** (-21.728)	-0.319*** (-21.732)	-0.319*** (-21.731)	-0.318*** (-21.694)
LEV	0.051*** (9.570)	0.051*** (9.555)	0.051*** (9.564)	0.051*** (9.548)	0.051*** (9.564)	0.051*** (9.566)	0.051*** (9.513)	0.051*** (9.491)	0.051*** (9.515)	0.051*** (9.491)	0.051*** (9.517)	0.051*** (9.522)	0.053*** (9.849)	0.052*** (9.804)	0.052*** (9.806)	0.052*** (9.799)	0.052*** (9.803)	0.052*** (9.826)
PPE	0.00500 (0.779)	0.00500 (0.761)	0.00500 (0.801)	0.00500 (0.827)	0.00500 (0.835)	0.00500 (0.830)	0.00600 (0.907)	0.00600 (0.890)	0.00600 (0.899)	0.00600 (0.895)	0.00600 (0.922)	0.00600 (0.881)	0.005 (0.844)	0.005 (0.879)	0.006 (0.979)	0.006 (0.971)	0.006 (0.977)	0.006 (0.952)
INTANG	-0.041** (-2.112)	-0.041** (-2.141)	-0.041** (-2.142)	-0.042** (-2.152)	-0.042** (-2.147)	-0.042** (-2.153)	-0.039** (-2.018)	-0.039** (-2.039)	-0.040** (-2.076)	-0.041** (-2.108)	-0.041** (-2.096)	-0.041** (-2.113)	-0.042** (-2.172)	-0.042** (-2.181)	-0.042** (-2.168)	-0.042** (-2.181)	-0.042** (-2.181)	-0.042** (-2.191)
SIZE	-0.003*** (-3.596)	-0.003*** (-3.585)	-0.003*** (-3.600)	-0.003*** (-3.603)	-0.003*** (-3.597)	-0.003*** (-3.600)	-0.004*** (-3.762)	-0.004*** (-3.760)	-0.004*** (-3.721)	-0.003*** (-3.702)	-0.004*** (-3.720)	-0.003*** (-3.689)	-0.004*** (-3.837)	-0.004*** (-3.845)	-0.004*** (-3.846)	-0.004*** (-3.842)	-0.004*** (-3.830)	-0.004*** (-3.816)
CF	-0.024*** (-4.336)	-0.025*** (-4.357)	-0.025*** (-4.344)	-0.024*** (-4.336)	-0.024*** (-4.322)	-0.024*** (-4.325)	-0.024*** (-4.319)	-0.025*** (-4.352)	-0.024*** (-4.341)	-0.024*** (-4.340)	-0.024*** (-4.315)	-0.024*** (-4.326)	-0.025*** (-4.491)	-0.025*** (-4.495)	-0.025*** (-4.470)	-0.025*** (-4.476)	-0.025*** (-4.469)	-0.025*** (-4.467)
BTM	-0.019*** (-10.412)	-0.019*** (-10.419)	-0.019*** (-10.404)	-0.019*** (-10.409)	-0.019*** (-10.411)	-0.019*** (-10.405)	-0.019*** (-10.296)	-0.019*** (-10.285)	-0.019*** (-10.311)	-0.019*** (-10.328)	-0.019*** (-10.307)	-0.019*** (-10.324)	-0.018*** (-9.927)	-0.018*** (-9.894)	-0.018*** (-9.869)	-0.018*** (-9.881)	-0.018*** (-9.888)	-0.018*** (-9.888)
INV	-0.124*** (-14.076)	-0.124*** (-14.089)	-0.124*** (-14.082)	-0.124*** (-14.084)	-0.124*** (-14.084)	-0.124*** (-14.074)	-0.123*** (-13.944)	-0.123*** (-13.946)	-0.124*** (-13.976)	-0.124*** (-14.006)	-0.124*** (-13.992)	-0.124*** (-14.012)	-0.124*** (-14.091)	-0.123*** (-14.044)	-0.123*** (-14.018)	-0.123*** (-14.035)	-0.123*** (-14.039)	-0.123*** (-14.049)
HNTE	-0.043*** (-21.347)	-0.043*** (-21.361)	-0.043*** (-21.365)	-0.043*** (-21.361)	-0.043*** (-21.352)	-0.043*** (-21.350)	-0.043*** (-21.286)	-0.043*** (-21.321)	-0.043*** (-21.370)	-0.043*** (-21.374)	-0.043*** (-21.375)	-0.043*** (-21.364)	-0.044*** (-22.034)	-0.044*** (-22.030)	-0.044*** (-21.990)	-0.044*** (-21.986)	-0.044*** (-21.982)	-0.044*** (-21.967)
Constant	0.260*** (12.304)	0.260*** (12.303)	0.260*** (12.305)	0.260*** (12.308)	0.260*** (12.299)	0.260*** (12.308)	0.266*** (12.236)	0.265*** (12.175)	0.263*** (12.077)	0.262*** (11.974)	0.263*** (12.030)	0.261*** (11.911)	0.267*** (12.566)	0.268*** (12.595)	0.268*** (12.595)	0.268*** (12.588)	0.268*** (12.575)	0.267*** (12.570)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.089	0.089	0.089	0.089	0.089	0.089	0.0890	0.0890	0.0890	0.0890	0.0890	0.0890	0.093	0.093	0.093	0.093	0.093	0.093
N	23,902	23,902	23,902	23,902	23,902	23,902	23,902	23,902	23,902	23,902	23,902	23,902	23,805	23,805	23,805	23,805	23,805	23,805

Note. This table presents the robustness checks for H1, H2, and H3 using alternative measure of Confucianism. The dependent variable is TA_ETR. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm.
***, **, and * indicate P < 1%, 5%, and 10%.
Source. Authors formation.

Table 6. Robustness check using alternative proxy of tax avoidance based on book-tax difference.

Variables	(1) COFM1	(2) COFM2	(3) COFM3	(4) COFM4	(5) COFM5	(6) COFM6	(7) COFM7	(8) COFM1	(9) COFM2	(10) COFM3	(11) COFM4	(12) COFM5	(13) COFM6	(14) COFM7	(15) COFM1	(16) COFM2	(17) COFM3	(18) COFM4	(19) COFM5	(20) COFM6	(21) COFM7
$COFM_N$	-0.009*** (-3.417)	-0.006** (-2.555)	-0.007*** (-2.902)	-0.007*** (-2.956)	-0.007*** (-2.885)	-0.006*** (-2.686)	-0.006*** (-2.598)	-0.036*** (-3.194)	-0.034*** (-3.076)	-0.039*** (-3.543)	-0.040*** (-3.752)	-0.038*** (-3.754)	-0.035*** (-3.549)	-0.032*** (-3.168)	-0.012*** (-3.094)	-0.012*** (-2.811)	-0.012*** (-3.013)	-0.012*** (-3.250)	-0.012*** (-3.262)	-0.011*** (-3.161)	-0.011*** (-2.778)
$COFM_N \times TE$								0.025** (2.484)	0.025*** (2.589)	0.028*** (2.996)	0.029*** (3.205)	0.029*** (3.227)	0.026*** (3.060)	0.023*** (2.678)							
$COFM_N \times$ STATE															0.008 (1.571)	0.011** (2.022)	0.010** (1.995)	0.011** (2.282)	0.011** (2.361)	0.011** (2.402)	0.009* (1.928)
STATE															-0.005 (-1.138)	-0.007 (-1.560)	-0.007 (-1.509)	-0.007* (-1.753)	-0.007* (-1.794)	-0.007* (-1.797)	-0.005 (-1.332)
TE								-0.021** (-2.372)	-0.020** (-2.462)	-0.022*** (-2.855)	-0.022*** (-3.040)	-0.021*** (-3.046)	-0.019*** (-2.868)	-0.016** (-2.503)							
ROA	0.509*** (52.756)	0.509*** (52.723)	0.509*** (52.735)	0.509*** (52.735)	0.509*** (52.731)	0.509*** (52.722)	0.509*** (52.721)	0.510*** (52.768)	0.509*** (52.730)	0.509*** (52.748)	0.510*** (52.752)	0.510*** (52.747)	0.509*** (52.735)	0.509*** (52.728)	0.508*** (52.308)	0.508*** (52.286)	0.508*** (52.299)	0.508*** (52.304)	0.508*** (52.301)	0.508*** (52.292)	0.508*** (52.283)
LEV	-0.004* (-1.895)	-0.004* (-1.892)	-0.004* (-1.907)	-0.004* (-1.908)	-0.004* (-1.901)	-0.004* (-1.892)	-0.004* (-1.885)	-0.004* (-1.942)	-0.004* (-1.945)	-0.004* (-1.964)	-0.004* (-1.968)	-0.004* (-1.960)	-0.004* (-1.947)	-0.004* (-1.930)	-0.004* (-1.832)	-0.004* (-1.839)	-0.004* (-1.859)	-0.004* (-1.866)	-0.004* (-1.861)	-0.004* (-1.853)	-0.004* (-1.839)
PPE	-0.001 (-0.733)	-0.001 (-0.690)	-0.001 (-0.682)	-0.001 (-0.667)	-0.001 (-0.657)	-0.001 (-0.650)	-0.001 (-0.646)	-0.001 (-0.642)	-0.001 (-0.590)	-0.001 (-0.551)	-0.001 (-0.518)	-0.001 (-0.507)	-0.001 (-0.514)	-0.001 (-0.530)	-0.002 (-0.954)	-0.002 (-0.889)	-0.002 (-0.886)	-0.001 (-0.855)	-0.001 (-0.846)	-0.001 (-0.844)	-0.002 (-0.883)
INTANG	-0.014*** (-2.727)	-0.014*** (-2.770)	-0.014*** (-2.754)	-0.014*** (-2.753)	-0.014*** (-2.750)	-0.014*** (-2.753)	-0.014*** (-2.739)	-0.014*** (-2.676)	-0.014*** (-2.721)	-0.014*** (-2.690)	-0.014*** (-2.684)	-0.014*** (-2.680)	-0.014*** (-2.688)	-0.014*** (-2.679)	-0.015*** (-2.912)	-0.015*** (-2.969)	-0.015*** (-2.950)	-0.015*** (-2.953)	-0.015*** (-2.952)	-0.015*** (-2.956)	-0.015*** (-2.938)
SIZE	0.000 (-1.033)	0.000 (-1.019)	0.000 (-1.019)	0.000 (-1.025)	0.000 (-1.031)	0.000 (-1.037)	0.000 (-1.042)	0.000 (-1.107)	0.000 (-1.097)	0.000 (-1.106)	0.000 (-1.124)	0.000 (-1.134)	0.000 (-1.139)	0.000 (-1.126)	-0.001* (-1.955)	-0.001* (-1.971)	-0.001* (-1.954)	-0.001* (-1.959)	-0.001** (-1.963)	-0.001** (-1.970)	-0.001** (-1.967)
CF	-0.029*** (-14.187)	-0.029*** (-14.178)	-0.029*** (-14.184)	-0.029*** (-14.185)	-0.029*** (-14.182)	-0.029*** (-14.177)	-0.029*** (-14.168)	-0.029*** (-14.184)	-0.029*** (-14.172)	-0.029*** (-14.176)	-0.029*** (-14.180)	-0.029*** (-14.177)	-0.029*** (-14.172)	-0.029*** (-14.162)	-0.029*** (-14.088)	-0.029*** (-14.075)	-0.029*** (-14.082)	-0.029*** (-14.083)	-0.029*** (-14.080)	-0.029*** (-14.075)	-0.029*** (-14.072)
BTM	0.007*** (17.486)	0.007*** (17.479)	0.007*** (17.493)	0.007*** (17.500)	0.007*** (17.502)	0.007*** (17.500)	0.007*** (17.504)	0.008*** (17.596)	0.008*** (17.599)	0.008*** (17.638)	0.008*** (17.658)	0.008*** (17.663)	0.008*** (17.657)	0.008*** (17.638)	0.007*** (17.250)	0.007*** (17.253)	0.007*** (17.263)	0.007*** (17.277)	0.007*** (17.280)	0.007*** (17.278)	0.007*** (17.264)
INV	0.001 (0.342)	0.001 (0.350)	0.001 (0.364)	0.001 (0.375)	0.001 (0.372)	0.001 (0.369)	0.001 (0.366)	0.001 (0.403)	0.001 (0.426)	0.001 (0.457)	0.001 (0.476)	0.001 (0.472)	0.001 (0.461)	0.001 (0.442)	0.000 (0.158)	0.000 (0.204)	0.001 (0.224)	0.001 (0.257)	0.001 (0.260)	0.001 (0.256)	0.001 (0.218)
HNTE	0.002*** (2.722)	0.001*** (2.673)	0.001*** (2.652)	0.001*** (2.643)	0.001*** (2.648)	0.001*** (2.660)	0.001*** (2.672)	0.001*** (2.709)	0.001*** (2.662)	0.001*** (2.612)	0.001*** (2.580)	0.001*** (2.585)	0.001*** (2.607)	0.001*** (2.633)	0.002*** (2.805)	0.002*** (2.809)	0.002*** (2.790)	0.002*** (2.793)	0.002*** (2.802)	0.002*** (2.817)	0.002*** (2.808)
Constant	0.006 (0.840)	0.004 (0.528)	0.004 (0.591)	0.004 (0.553)	0.003 (0.490)	0.003 (0.404)	0.003 (0.384)	0.029** (2.479)	0.027** (2.349)	0.029*** (2.679)	0.029*** (2.774)	0.028*** (2.704)	0.024** (2.473)	0.021*** (2.159)	0.014* (1.904)	0.013* (1.790)	0.013* (1.811)	0.013* (1.846)	0.012* (1.787)	0.012* (1.696)	0.011 (1.553)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R²	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.456	0.456	0.456	0.456	0.456	0.456	0.456
N	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	20950	20,950	20,950	20,950	20,950	20,950	20,950

Note. This table presents the robustness checks for H1, H2, and H3 using alternative measure of tax avoidance based on book-tax difference (BTD). Dependent variable is book-tax difference. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm.
***, **, and * indicate P < 1%, 5%, and 10%.
Source. Authors formation.

on $COFM_N \times STATE$ are positive, providing support to H3, elaborating that Confucian culture and tax avoidance association is less prominent for SOEs.

4.5.3. Alternative measure of tax avoidance using residuals of book-tax difference

Table 7 reports the results considering residuals book-tax-difference (DD_BTD) as additional measure of tax avoidance. As expected, coefficients on $COFM_N$ are negative and significant in all columns (except column (2)), providing support to H1, indicating that Confucian culture lessens tax avoidance. The coefficients on interaction term ($COFM_N \times TE$) are positive, lending support to H2, suggesting that the tax enforcement efforts attenuate the association between Confucian culture and tax avoidance. Finally, columns (15)–(21) show that interaction term coefficients ($COFM_N \times STATE$) are positive, lending support to H3, suggesting that relationship between Confucian culture and tax avoidance is weaker for SOEs. These results provide strong support to main findings and are still consistent with an alternative measure of tax avoidance.

4.5.4. Economic mechanisms: Confucianism and managerial agency cost

Our main argument is hinged on the view that Confucianism can reduce tax avoidance by restraining agency problems. To validate our argument, we examine the effect of Confucianism on managerial agency costs. We follow Ang et al. (2000), and used two proxies of managerial agency costs. Our first proxy captures managers' discretionary activities and is measured using general and administrative expenses divided by sales ($EXPENSES$). A high value of $EXPENSES$ indicates a higher level of agency problems and vice versa. Our second proxy captures how efficient managers use a firm's assets and is measured using asset turnover ($TURNOVER$). We argue that a high asset turnover can represent fewer agency problems. Thus, we expect that Confucianism can increase $EXPENSES$, whereas decreases $TURNOVER$. We use Sobel intermediary factor test method (Baron & Kenny, 1986) to examine the economic mechanism as follows:

$$TA_{i,t} = \gamma_0 + \gamma_1 COFM_N + \sum \gamma_i Control_{i,t} + \varepsilon_{i,t} \tag{11}$$

$$EXPENSES_{i,t} \text{ or } TURNOVER_{i,t} = \gamma_0 + \gamma_1 COFM_N + \sum \gamma_i Control_{i,t} + \varepsilon_{i,t} \tag{12}$$

$$TA_{i,t} = \gamma_0 + \gamma_1 COFM_N + \gamma_2 EXPENSES_{i,t} \text{ or } TURNOVER_{i,t} + \sum \gamma_i Control_{i,t} + \varepsilon_{i,t} \tag{13}$$

where $TA_{i,t}$ is the tax avoidance as TA_ETR; $EXPENSES$ and $TURNOVER$ are the measures of agency costs; $COFM_N$ represents Confucianism; and $Control$ represents control variables.

The results are presented in Table 8. Panel A displays the results for $EXPENSES$. The coefficient on $COFM1$[3] is significantly negative in column (2), which illustrates that Confucian culture can decrease $EXPENSE$ significantly. Most importantly, when we add the intermediary effect in column (3), the coefficient on $COFM1$ significantly reduces from 0.029 to 0.026, and it's significance level decreases from 1% to 5%.

Table 7. Robustness checks using alternative proxy of tax avoidance based on residuals of book-tax difference.

Variables	(1) COFM1	(2) COFM2	(3) COFM3	(4) COFM4	(5) COFM5	(6) COFM6	(7) COFM7	(8) COFM1	(9) COFM2	(10) COFM3	(11) COFM4	(12) COFM5	(13) COFM6	(14) COFM7	(15) COFM1	(16) COFM2	(17) COFM3	(18) COFM4	(19) COFM5	(20) COFM6	(21) COFM7
$COFM_N$	-0.006** (-2.269)	-0.004 (-1.534)	-0.005** (-1.977)	-0.005* (-1.999)	-0.005* (-1.918)	-0.004* (-1.719)	-0.004* (-1.807)	-0.042*** (-3.539)	-0.040*** (-3.377)	-0.043*** (-3.745)	-0.043*** (-3.875)	-0.042*** (-3.881)	-0.039*** (-3.707)	-0.036*** (-3.448)	-0.011*** (-2.681)	-0.011*** (-2.637)	-0.012*** (-2.912)	-0.012*** (-3.124)	-0.012*** (-3.117)	-0.011*** (-3.023)	-0.011*** (-2.812)
$COFM_N \times TE$								0.033*** (3.131)	0.032*** (3.162)	0.034*** (3.450)	0.034*** (3.582)	0.034*** (3.607)	0.032*** (3.472)	0.029*** (3.183)							
$COFM_N \times STATE$															0.012** (2.247)	0.016*** (2.884)	0.015*** (2.876)	0.016*** (3.153)	0.016*** (3.218)	0.016*** (3.267)	0.014*** (2.834)
STATE															-0.008 (-1.531)	-0.010** (-2.124)	-0.009** (-2.072)	-0.010** (-2.281)	-0.009** (-2.287)	-0.009** (-2.277)	-0.007* (-1.856)
TE								-0.027*** (-2.966)	-0.026*** (-2.977)	-0.027*** (-3.251)	-0.026*** (-3.357)	-0.024*** (-3.362)	-0.022*** (-3.209)	-0.020*** (-2.930)							
ROA	0.402*** (42.690)	0.402*** (42.662)	0.402*** (42.675)	0.402*** (42.673)	0.402*** (42.669)	0.402*** (42.662)	0.402*** (42.668)	0.402*** (42.725)	0.402*** (42.694)	0.402*** (42.712)	0.402*** (42.713)	0.402*** (42.708)	0.402*** (42.697)	0.402*** (42.697)	0.402*** (42.452)	0.402*** (42.437)	0.402*** (42.450)	0.402*** (42.452)	0.402*** (42.448)	0.402*** (42.441)	0.402*** (42.440)
LEV	0.000 (0.178)	0.000 (0.183)	0.000 (0.167)	0.000 (0.167)	0.000 (0.173)	0.000 (0.181)	0.000 (0.182)	0.000 (0.119)	0.000 (0.119)	0.000 (0.102)	0.000 (0.099)	0.000 (0.107)	0.000 (0.119)	0.000 (0.128)	0.000 (0.168)	0.000 (0.163)	0.000 (0.139)	0.000 (0.133)	0.000 (0.137)	0.000 (0.144)	0.000 (0.150)
PPE	0.028*** (15.822)	0.028*** (15.861)	0.028*** (15.855)	0.028*** (15.864)	0.028*** (15.870)	0.028*** (15.875)	0.028*** (15.874)	0.028*** (15.947)	0.029*** (15.998)	0.029*** (16.023)	0.029*** (16.011)	0.029*** (16.058)	0.029*** (16.050)	0.029*** (16.031)	0.028*** (15.413)	0.028*** (15.487)	0.028*** (15.479)	0.028*** (15.503)	0.028*** (15.508)	0.028*** (15.513)	0.028*** (15.474)
INTANG	0.011** (1.989)	0.010* (1.959)	0.010* (1.971)	0.010* (1.972)	0.010* (1.974)	0.010** (1.971)	0.011** (1.982)	0.011** (2.064)	0.011** (2.030)	0.011** (2.057)	0.011** (2.062)	0.011** (2.065)	0.011** (2.056)	0.011** (2.066)	0.009* (1.737)	0.009* (1.689)	0.009* (1.704)	0.009* (1.703)	0.009* (1.702)	0.009* (1.698)	0.009* (1.709)
SIZE	0.000 (0.783)	0.000 (0.791)	0.000 (0.793)	0.000 (0.789)	0.000 (0.785)	0.000 (0.781)	0.000 (0.778)	0.000 (0.676)	0.000 (0.680)	0.000 (0.675)	0.000 (0.661)	0.000 (0.653)	0.000 (0.647)	0.000 (0.661)	0.000 (-0.681)	0.000 (-0.711)	0.000 (-0.682)	0.000 (-0.681)	0.000 (-0.681)	0.000 (-0.684)	0.000 (-0.674)
CF	-0.004* (-1.912)	-0.004* (-1.902)	-0.004* (-1.909)	-0.004* (-1.910)	-0.004* (-1.907)	-0.004* (-1.903)	-0.004* (-1.900)	-0.004* (-1.904)	-0.004* (-1.891)	-0.004* (-1.896)	-0.004* (-1.899)	-0.004* (-1.897)	-0.004* (-1.893)	-0.004* (-1.889)	-0.004* (-1.760)	-0.004* (-1.742)	-0.004* (-1.751)	-0.004* (-1.750)	-0.004* (-1.748)	-0.004* (-1.744)	-0.004* (-1.749)
BTM	0.007*** (14.614)	0.007*** (14.611)	0.007*** (14.620)	0.007*** (14.624)	0.007*** (14.625)	0.007*** (14.624)	0.007*** (14.627)	0.007*** (14.754)	0.007*** (14.764)	0.007*** (14.796)	0.007*** (14.811)	0.007*** (14.816)	0.007*** (14.811)	0.007*** (14.794)	0.007*** (14.489)	0.007*** (14.509)	0.007*** (14.509)	0.007*** (14.518)	0.007*** (14.519)	0.007*** (14.518)	0.007*** (14.502)
INV	-0.013*** (-5.160)	-0.013*** (-5.152)	-0.013*** (-5.145)	-0.013*** (-5.138)	-0.013*** (-5.139)	-0.013*** (-5.141)	-0.013*** (-5.144)	-0.013*** (-5.082)	-0.013*** (-5.059)	-0.013*** (-5.039)	-0.013*** (-5.026)	-0.013*** (-5.028)	-0.013*** (-5.037)	-0.013*** (-5.053)	-0.014*** (-5.323)	-0.014*** (-5.260)	-0.014*** (-5.245)	-0.014*** (-5.214)	-0.014*** (-5.210)	-0.014*** (-5.212)	-0.014*** (-5.249)
HNTE	0.001* (1.738)	0.001* (1.709)	0.001* (1.690)	0.001* (1.685)	0.001* (1.689)	0.001* (1.698)	0.001* (1.703)	0.001* (1.721)	0.001* (1.695)	0.001 (1.642)	0.001 (1.612)	0.001 (1.616)	0.001 (1.637)	0.001* (1.654)	0.001** (1.988)	0.001** (2.036)	0.001** (2.020)	0.001** (2.025)	0.001** (2.032)	0.001** (2.046)	0.001** (2.028)
Constant	-0.007 (-0.959)	-0.009 (-1.226)	-0.008 (-1.131)	-0.008 (-1.170)	-0.008 (-1.225)	-0.009 (-1.302)	-0.009 (-1.279)	0.024* (1.949)	0.021* (1.762)	0.023* (1.966)	0.022* (1.955)	0.020* (1.852)	0.017 (1.611)	0.014 (1.372)	0.006 (0.776)	0.006 (0.771)	0.006 (0.798)	0.006 (0.797)	0.005 (0.720)	0.004 (0.625)	0.004 (0.545)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.329	0.327	0.327	0.327	0.327	0.327	0.327	0.327
N	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	21,041	20,950	20,950	20,950	20,950	20,950	20,950	20,950

Note. This table presents the robustness checks for H1, H2, and H3 using alternative measure of tax avoidance based on residuals book-tax difference. Dependent variable is residuals of book tax difference. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm. ***, **, and * indicate P < 1%, 5%, and 10%.
Source. Authors formation.

Table 8. Economic mechanisms: Confucianism and tax avoidance.

Variables	Panel A: EXPENSES			Variables	Panel B: TURNOVER		
	(1) TA_ETR	(2) EXPENSES	(3) TA_ETR		(4) TA_ETR	(5) TURNOVER	(6) TA_ETR
COFM1	−0.029***	−0.064***	−0.026**	COFM1	−0.029***	0.580***	−0.031***
	(−2.682)	(−12.612)	(−2.449)		(−2.682)	(16.713)	(−2.910)
EXPENSES			0.134***	TURNOVER			−0.007***
			(9.072)				(−3.688)
ROA	−0.312***	−0.296***	−0.276***	ROA	−0.312***	1.463***	−0.305***
	(−21.077)	(−18.288)	(−17.110)		(−21.077)	(13.331)	(−18.936)
LEV	0.051***	−0.021***	0.046***	LEV	0.051***	0.506***	0.047***
	(9.522)	(−4.572)	(8.159)		(9.522)	(18.336)	(7.998)
PPE	0.004	−0.039***	0.015**	PPE	0.00400	0.059**	0.011*
	(0.709)	(−10.327)	(2.434)		(0.709)	(2.187)	(1.671)
INTANG	−0.040**	0.111***	−0.054***	INTANG	−0.040**	−0.470***	−0.042**
	(−2.044)	(9.407)	(−2.711)		(−2.044)	(−7.339)	(−2.130)
SIZE	−0.003***	−0.015***	0.00100	SIZE	−0.003***	0.007	−0.001
	(−3.570)	(−25.386)	(0.599)		(−3.570)	(1.567)	(−1.412)
CF	−0.024***	−0.013***	−0.022***	CF	−0.024***	0.027	−0.024***
	(−4.335)	(−3.125)	(−4.000)		(−4.335)	(0.911)	(−4.274)
BTM	−0.019***	−0.010***	−0.017***	BTM	−0.019***	−0.029***	−0.019***
	(−10.415)	(−12.078)	(−9.450)		(−10.415)	(−3.659)	(−10.267)
INV	−0.124***	−0.086***	−0.108***	INV	−0.124***	0.238***	−0.118***
	(−14.114)	(−15.478)	(−11.874)		(−14.114)	(6.243)	(−13.058)
HNTE	−0.043***	0.008***	−0.042***	HNTE	−0.043***	−0.066***	−0.042***
	(−21.331)	(7.553)	(−20.747)		(−21.331)	(−8.750)	(−20.416)
Constant	0.282***	0.507***	0.180***	Constant	0.282***	−0.305***	0.246***
	(12.498)	(37.718)	(7.617)		(12.498)	(−3.116)	(10.706)
Industry/Year	Yes	Yes	Yes	Industry/Year	Yes	Yes	Yes
R²	0.089	0.277	0.087	R²	0.089	0.197	0.083
N	23,902	23,639	23,615	N	23,902	23,639	23,615
Sobel Z (p–value)		−7.813(0.000)				−4.637(0.000)	

Note. This table presents the results of economic mechanism between Confucianism and tax avoidance. Panel A represent results for general and administrative expense (*EXPENSE*), whereas in Panel B for asset turnover (*TURNOVER*). Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm.
***, **, and * indicate P < 1%, 5%, and 10%.
Source. Authors formation.

Since Sobel Z value is statistically significant, it suggest that there exist a partial mediation effect, which confirms that Confucian culture lessens tax avoidance by alleviating manager's discretionary activities (*EXPENSES*).

Panel B presents the results for *TURNOVER*. Column (5) shows significant positive coefficient on *COFM1*, which indicate that Confucianism increases asset turnover significantly. Further, when we add the intermediary effect in column (6), the coefficient on *COFM1* remain significantly negative. The Sobel Z value is also statistically significant, which suggests that and there is a partial mediation effect. This finding indicate that Confucianism lessens tax avoidance by enhancing asset turnover (measured using *TURNOVER*). Overall, the findings in this section illustrates that the economic mechanism behind the negative association between Confucianism and tax avoidance is agency problems.

4.5.5. Additional control variables
Although in our analysis, we have used several control variables, however, it is still possible that our results can be influenced by firm-level and regional attributes. Therefore, we control for several attributes to further check the robustness of our

findings. First, since our main variable of interest is geographically based, therefore, we control for regional variables following prior studies (Cao et al., 2016; Chen, Ye, et al., 2019; Du, 2016). Specifically, we control for legal development (denoted by *LAW*, legal environment index provided by Fan et al., 2016), GDP per capita (denoted by *GDPPC*, provincial-level per capita GDP (in RMB 10,000) where company is located), population (denoted by *POPULATION*, the number of people in the province where company is located), government intervention (denoted by *GOVERNMENT*, a variable that takes value one if the government-market relationship index is lower than the median and zero otherwise. The government-market relationship index is obtained from Fan et al. (2016). Second, we also control for firm-level governance variables, such as board size (denoted by *BOARD*, measured using natural logarithm of number of directors), board independence (denoted by *IND*, using proportion of independent directors), and CEO duality (denoted by *DUALITY*, measured using a dummy variable, if CEO and chairman are the same, it equals one, otherwise zero).

We report the regression results using additional control variables in Table 9. Notably, the results in all columns indicate positive coefficients on $COFM_N$, providing strong support to H1, indicating that Confucian culture alleviates tax avoidance. Further, coefficients on interaction term ($COFM_N \times TE$) are negative, lending support to H2, indicating the tax enforcement efforts attenuates the Confucianism and tax avoidance association. Moreover, coefficients on interaction term ($COFM_N \times STATE$) are negative, providing support to H3, elaborating that the Confucianism and tax avoidance association is weaker for SOEs. Overall, the findings remain consistent after controlling for regional and firm-level governance factors.

5. Conclusions

The tax avoidance literature has addressed that corporations will use complex corporate strategies to avoid taxes and shift organization resources to pursue private benefits. There are numerous studies in the literature which seek to identify factors that mitigate tax avoidance incentives. Recent studies show that informal institutions can lessen tax avoidance behavior. We continue to this stream of literature by showing that Confucian culture promotes ethical behavior and reduces tax avoidance behavior.

Using a sample of Chinese firms, we find strong evidence that Confucian culture lessens tax avoidance behavior. Our results are consistent with the notion that as an ethical philosophy, Confucian culture promotes ethical practices and thus curbs tax avoidance in corporations. Furthermore, we document that tax enforcement efforts attenuate the effect of Confucian culture on tax avoidance. This result suggests that Confucian culture is less influential when formal governance mechanisms (tax enforcement efforts) are stronger. Moreover, our analysis shows that the association between tax avoidance and Confucian culture is less pronounced for SOEs. Our results remain valid to alternative measures of Confucianism and tax avoidance variables.

This study has several important implications. First, we show that Confucian culture can promote ethical behavior and thus reduce tax avoidance. The findings lend

Table 9. Additional control variables.

Variables	(1) COFM1	(2) COFM2	(3) COFM3	(4) COFM4	(5) COFM5	(6) COFM6	(7) COFM7	(8) COFM1	(9) COFM2	(10) COFM3	(11) COFM4	(12) COFM5	(13) COFM6	(14) COFM7	(15) COFM1	(16) COFM2	(17) COFM3	(18) COFM4	(19) COFM5	(20) COFM6	(21) COFM7
$COFM_N$	-0.025** (-2.014)	-0.023* (-1.866)	-0.023* (-1.913)	-0.024** (-2.092)	-0.023** (-2.149)	-0.024** (-2.273)	-0.024** (-2.179)	-0.112** (-2.314)	-0.100** (-2.076)	-0.096** (-2.110)	-0.095** (-2.196)	-0.096** (-2.268)	-0.097** (-2.341)	-0.095** (-2.270)	-0.040** (-2.384)	-0.044** (-2.657)	-0.038** (-2.451)	-0.038** (-2.563)	-0.036** (-2.544)	-0.037** (-2.674)	-0.037** (-2.536)
$COFM_N \times TE$								0.078* (1.898)	0.068* (1.691)	0.066* (1.703)	0.064* (1.743)	0.065* (1.807)	0.065* (1.856)	0.064* (1.804)							
$COFM_N \times STATE$															0.038* (1.779)	0.047** (2.234)	0.040** (1.963)	0.038** (1.997)	0.037** (1.963)	0.037** (2.026)	0.035* (1.872)
STATE															-0.033* (-1.665)	-0.039** (-2.104)	-0.032* (-1.828)	-0.030* (-1.849)	-0.027* (-1.805)	-0.027* (-1.857)	-0.025* (-1.707)
TE								-0.067* (-1.869)	-0.057* (-1.679)	-0.053* (-1.694)	-0.050* (-1.723)	-0.049* (-1.779)	-0.048* (-1.820)	-0.046* (-1.785)							
ROA	-0.315*** (-20.652)	-0.315*** (-20.660)	-0.315*** (-20.655)	-0.315*** (-20.650)	-0.315*** (-20.651)	-0.315*** (-20.654)	-0.315*** (-20.660)	-0.314*** (-20.630)	-0.314*** (-20.642)	-0.314*** (-20.632)	-0.314*** (-20.624)	-0.314*** (-20.625)	-0.314*** (-20.629)	-0.314*** (-20.635)	-0.319*** (-21.141)	-0.319*** (-21.135)	-0.319*** (-21.132)	-0.319*** (-21.127)	-0.319*** (-21.128)	-0.319*** (-21.130)	-0.319*** (-21.134)
LEV	0.050*** (9.147)	0.050*** (9.141)	0.050*** (9.137)	0.050*** (9.135)	0.050*** (9.137)	0.050*** (9.138)	0.050*** (9.141)	0.050*** (9.117)	0.050*** (9.116)	0.050*** (9.116)	0.050*** (9.113)	0.050*** (9.115)	0.050*** (9.117)	0.050*** (9.122)	0.051*** (9.378)	0.051*** (9.369)	0.051*** (9.358)	0.051*** (9.353)	0.051*** (9.355)	0.051*** (9.356)	0.051*** (9.361)
PPE	0.009 (1.396)	0.009 (1.412)	0.009 (1.436)	0.009 (1.443)	0.009 (1.443)	0.009 (1.433)	0.009 (1.421)	0.009 (1.451)	0.009 (1.454)	0.01 (1.489)	0.01 (1.500)	0.01 (1.500)	0.009 (1.486)	0.009 (1.468)	0.009 (1.334)	0.009 (1.368)	0.009 (1.368)	0.009 (1.374)	0.009 (1.369)	0.009 (1.362)	0.008 (1.332)
INTANG	-0.041** (-2.052)	-0.041** (-2.075)	-0.041** (-2.060)	-0.041** (-2.057)	-0.041** (-2.055)	-0.041** (-2.049)	-0.041** (-2.049)	-0.040** (-2.005)	-0.041** (-2.046)	-0.040** (-2.031)	-0.040** (-2.028)	-0.040** (-2.024)	-0.040** (-2.024)	-0.040** (-2.020)	-0.044** (-2.217)	-0.045** (-2.250)	-0.044** (-2.230)	-0.044** (-2.226)	-0.044** (-2.225)	-0.044** (-2.225)	-0.044** (-2.222)
SIZE	-0.004*** (-4.013)	-0.004*** (-4.026)	-0.004*** (-4.033)	-0.004*** (-4.039)	-0.004*** (-4.041)	-0.004*** (-4.044)	-0.004*** (-4.035)	-0.004*** (-4.042)	-0.004*** (-4.048)	-0.004*** (-4.056)	-0.004*** (-4.068)	-0.004*** (-4.073)	-0.004*** (-4.078)	-0.004*** (-4.063)	-0.004*** (-4.435)	-0.004*** (-4.470)	-0.004*** (-4.450)	-0.004*** (-4.448)	-0.004*** (-4.444)	-0.004*** (-4.446)	-0.004*** (-4.435)
CF	-0.025*** (-4.366)	-0.025*** (-4.365)	-0.025*** (-4.360)	-0.025*** (-4.361)	-0.025*** (-4.361)	-0.025*** (-4.363)	-0.025*** (-4.361)	-0.025*** (-4.362)	-0.025*** (-4.359)	-0.025*** (-4.353)	-0.025*** (-4.355)	-0.025*** (-4.356)	-0.025*** (-4.358)	-0.025*** (-4.357)	-0.026*** (-4.544)	-0.026*** (-4.538)	-0.026*** (-4.536)	-0.026*** (-4.537)	-0.026*** (-4.539)	-0.026*** (-4.539)	-0.026*** (-4.542)
BTM	-0.017*** (-9.396)	-0.017*** (-9.385)	-0.017*** (-9.369)	-0.017*** (-9.360)	-0.017*** (-9.359)	-0.017*** (-9.358)	-0.017*** (-9.364)	-0.017*** (-9.339)	-0.017*** (-9.331)	-0.017*** (-9.310)	-0.017*** (-9.298)	-0.017*** (-9.294)	-0.017*** (-9.291)	-0.017*** (-9.301)	-0.017*** (-9.013)	-0.017*** (-8.987)	-0.017*** (-8.988)	-0.017*** (-8.984)	-0.017*** (-8.987)	-0.017*** (-8.985)	-0.017*** (-9.000)
INV	-0.126*** (-13.863)	-0.126*** (-13.855)	-0.126*** (-13.840)	-0.126*** (-13.831)	-0.126*** (-13.834)	-0.126*** (-13.839)	-0.126*** (-13.849)	-0.126*** (-13.839)	-0.125*** (-13.833)	-0.125*** (-13.816)	-0.125*** (-13.804)	-0.125*** (-13.808)	-0.125*** (-13.815)	-0.125*** (-13.831)	-0.126*** (-13.972)	-0.126*** (-13.922)	-0.126*** (-13.911)	-0.126*** (-13.890)	-0.126*** (-13.893)	-0.126*** (-13.897)	-0.126*** (-13.924)
HNTE	-0.044*** (-20.877)	-0.044*** (-20.895)	-0.044*** (-20.903)	-0.044*** (-20.919)	-0.044*** (-20.925)	-0.044*** (-20.931)	-0.044*** (-20.921)	-0.044*** (-20.880)	-0.044*** (-20.901)	-0.044*** (-20.925)	-0.044*** (-20.954)	-0.044*** (-20.963)	-0.044*** (-20.967)	-0.044*** (-20.951)	-0.045*** (-21.435)	-0.045*** (-21.381)	-0.045*** (-21.392)	-0.045*** (-21.405)	-0.045*** (-21.407)	-0.045*** (-21.408)	-0.045*** (-21.412)
GOVERNMENT	0.000 (0.004)	0.000 (-0.079)	0.000 (-0.150)	-0.001 (-0.208)	-0.001 (-0.230)	-0.001 (-0.266)	-0.001 (-0.257)	0.000 (0.107)	0.000 (-0.005)	0.000 (-0.070)	0.000 (-0.132)	0.000 (-0.142)	-0.001 (-0.164)	0.000 (-0.141)	-0.002 (-0.609)	-0.002 (-0.677)	-0.002 (-0.713)	-0.002 (-0.741)	-0.002 (-0.749)	-0.002 (-0.780)	-0.002 (-0.797)
LAW	0.000 (0.707)	0.000 (0.617)	0.000 (0.616)	0.000 (0.649)	0.000 (0.675)	0.000 (0.715)	0.000 (0.642)	0.000 (0.518)	0.000 (0.466)	0.000 (0.461)	0.000 (0.497)	0.000 (0.527)	0.000 (0.575)	0.000 (0.493)	0.001 (1.433)	0.001 (1.448)	0.000 (1.400)	0.000 (1.416)	0.001 (1.423)	0.001 (1.460)	0.000 (1.374)
GDPPC	0.001 (0.261)	0.001 (0.385)	0.001 (0.337)	0.001 (0.301)	0.001 (0.261)	0.001 (0.230)	0.001 (0.208)	0.002 (0.513)	0.002 (0.574)	0.002 (0.504)	0.002 (0.461)	0.001 (0.416)	0.001 (0.381)	0.001 (0.352)	-0.004 (-1.202)	-0.004 (-1.131)	-0.004 (-1.170)	-0.004 (-1.193)	-0.004 (-1.222)	-0.004 (-1.242)	-0.004 (-1.232)
POPULATION	-0.003 (-1.558)	-0.003 (-1.630)	-0.003* (-1.755)	-0.003* (-1.761)	-0.003* (-1.757)	-0.003* (-1.711)	-0.003* (-1.671)	-0.002 (-0.890)	-0.002 (-0.959)	-0.002 (-1.162)	-0.002 (-1.173)	-0.002 (-1.157)	-0.002 (-1.094)	-0.002 (-1.101)	-0.003 (-1.562)	-0.003 (-1.588)	-0.003* (-1.750)	-0.003* (-1.778)	-0.003* (-1.788)	-0.003* (-1.747)	-0.003* (-1.692)
IND	0.003 (0.135)	0.003 (0.134)	0.002 (0.124)	0.002 (0.119)	0.002 (0.118)	0.002 (0.122)	0.003 (0.132)	0.002 (0.123)	0.002 (0.128)	0.002 (0.109)	0.002 (0.097)	0.002 (0.098)	0.002 (0.107)	0.002 (0.123)	-0.001 (-0.033)	0.000 (-0.023)	0.000 (-0.025)	-0.001 (-0.030)	-0.001 (-0.033)	-0.001 (-0.032)	0.000 (-0.024)
BOARD	0.000 (-0.081)	0.000 (-0.076)	0.000 (-0.076)	0.000 (-0.077)	0.000 (-0.071)	0.000 (-0.066)	0.000 (-0.059)	0.000 (-0.080)	0.000 (-0.073)	0.000 (-0.078)	0.000 (-0.080)	0.000 (-0.072)	0.000 (-0.063)	0.000 (-0.052)	-0.002 (-0.346)	-0.002 (-0.332)	-0.002 (-0.330)	-0.002 (-0.331)	-0.002 (-0.330)	-0.002 (-0.330)	-0.002 (-0.331)
DUALITY	0.002 (1.114)	0.002 (1.131)	0.002 (1.131)	0.002 (1.128)	0.002 (1.128)	0.002 (1.127)	0.002 (1.133)	0.002 (1.103)	0.002 (1.112)	0.002 (1.106)	0.002 (1.100)	0.002 (1.100)	0.002 (1.103)	0.002 (1.109)	0.002 (1.126)	0.002 (1.147)	0.002 (1.146)	0.002 (1.138)	0.002 (1.140)	0.002 (1.143)	0.002 (1.153)
Constant	0.326*** (5.758)	0.322*** (5.695)	0.326*** (5.756)	0.327*** (5.776)	0.328*** (5.783)	0.328*** (5.781)	0.326*** (5.764)	0.380*** (5.496)	0.368*** (5.422)	0.370*** (5.499)	0.369*** (5.525)	0.368*** (5.547)	0.365*** (5.550)	0.364*** (5.538)	0.400*** (7.008)	0.401*** (7.047)	0.400*** (7.029)	0.400*** (7.034)	0.399*** (7.025)	0.399*** (7.029)	0.396*** (6.990)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.094	0.094	0.094	0.094	0.094	0.094	0.094	0.095	0.094	0.094	0.094	0.095	0.095	0.095	0.098	0.098	0.098	0.098	0.098	0.098	0.098
N	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,397	22,312	22,312	22,312	22,312	22,312	22,312	22,312

Note. This table reports the results using additional control variables. The dependent variable is TA_ETR. Variables definitions are located in Appendix. Robust t-statistics in parenthesis are clustered by firm. ***, **, and * indicate P < 1%, 5%, and 10%.
Source. Authors formation.

important support to the existing literature by showing that culture can influence corporate behavior. Second, this study suggests that Confucian culture has a significant influence on people's behavior and can also shape corporate decisions in Chinese firms. Third, the results provide strong support to existing literature by showing that informal philosophies can lessen unethical corporate behavior. Especially in emerging economies like China, where standard governance mechanisms are less influential in guiding boardroom practices, Confucian culture can serve as an alternative mechanism to enhance ethical practices in organizations. Finally, the results show that the effect of culture is weaker when formal mechanisms are stronger and thus suggest that formal and informal governance mechanisms are partial substitutes.

We acknowledge two limitations. First, we assume that our conclusions are based on the Confucian culture, which has an influence on the East Asian countries, which limits the generalizability of the results to other economies that are less affected by Confucianism. Second, we measure Confucianism considering seven national Confucianism centers. In China, there are hundreds of Confucian temples, but our study includes only Confucianism centers because of difficulties in obtaining data of Confucian temples. Future research may focus on exploring how Confucian culture can influence other corporate unethical practices.

Notes

1. The tax literature generally suggests two kind of tax strategies, that are: tax avoidance and tax evasions (see Hanlon & Heitzman (2010) for a review). These two scenarios are different from legislative perspective. Tax avoidance is often referred legal exploitation of tax system to reduce current or future tax liabilities. Tax evasion, on the other hand, refers to illegal practice by not paying tax, by hiding income and expenses. Therefore, "tax avoidance" is considered as legal tax planning, while "tax evasion" as illegal tax planning.
2. We began our sample from 2004 because the nature of enterprise has been precisely defined on CSMAR database since 2004.
3. For brevity, we only report the results for *COFM1*. Our results are also consisted for other measures of Confucianism (*COFM2–COFM7*).

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Appendix: Variables definitions

Variables	Definitions
Dependent variables	
TA_ETR	The statutory tax rate less the effective tax rate
BTD	Book–tax difference, defined as book income less taxable income, scaled by total assets
DD_BTD	Residual book-tax difference, computed using residuals from the following firm fixed-effects regression: $BTD = \beta_1 TA + \mu + \varepsilon$ BTD is the total book-tax difference, which equals book income less taxable income, scaled by total assets; TA is total accruals measured using the cash flow method, which equals income before extraordinary items minus net cash flow from operating activities, scaled by total assets
Independent variables	
$COFM_N$	Confucianism variables, defined as geographical proximity-based Confucianism variables based on the distance between a firm's registered address and 7 Confucianism centers (Du, 2015)
$COFM_R$	The number of Confucianism centers within the radius of R kilometers ($R = 200$, 220, 240, 260, 280, 300) around a firm's registered address (Du, 2015)
Moderating variables	
TE	Tax enforcement efforts, measured by dividing the actual tax ratio by the estimated one (Xu et al., 2011)
STATE	Nature of enterprise, a dummy variable which equals one if the firm is controlled by the state and zero otherwise.
Control variables	
HNTE	A dummy variable indicating if a firm is a high and new technology enterprise, otherwise zero.
ROA	Net profit over total assets
LEV	Total liabilities over total assets
PPE	Gross property, plant and equipment over total assets
INTANG	Intangible assets scaled by beginning total assets
SIZE	Natural logarithm of total assets
CF	The change in pretax operating cash flow from continuing operations from year t to $t-1$ scaled by total assets
BTM	Book value of equity over market value of equity
INV	Net balance of Inventory over total assets
EXPENSE	General and administrative expense over sales
TURNOVER	Asset turnover
GOVERNMENT	A variable that takes value one if the government-market relationship index is lower than the median and zero otherwise. The government-market relationship index is obtained from Fan et al. (2016)
GDPPC	Provincial level per capita GDP (in RMB 10,000) where company is located
LAW	Legal environment index from Fan et al. (2016)
POPULATION	The number of people in a province where company is located
BOARD	Natural-logarithm of number of directors
IND	Proportion on independent directors
DUALITY	A dummy variable, when CEO is also board chair, equals one, otherwise zero.

Source. Authors formation.