

## ANTI-CORRUPTION, AGENCY COST, AND EARNINGS QUALITY IN THAI SETTINGS

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### Abstract

The participation in anti-corruption activities is a voluntary program for a firm. The study presented here therefore addresses the connection between anti-corruption activity participation and agency problems of Thai listed firms during 2011-2016. We employed different proxies for agency problems in our investigation. We find that the firms participating in anti-corruption activities are more likely to have low agency cost and good corporate governance mechanism. In addition, earnings information is of higher quality for the firms participating in anti-corruption activities. The evidence suggests that the participation in anti-corruption activities should encourage the business sustainability as promoted by Thai regulators.

**Keywords:** Anti-Corruption, Agency Cost, Earnings Quality, Agency Theory, Corporate Governance

### Introduction

In Thailand, the Organic Law on Counter Corruption 2009 (Issue 2) 2011 enacting on 19 April 2011 has been established to promote corruption free. The global corruption perceptions index has been recently published by The Transparency International for 2021. Thai score was 35 out of 100. Its score in 2000 was 3.2 out of 10. Unfavourable perceptions about corruption in Thailand increased from 2000 to 2021. For Thai private sector, firms listed on Thai stock exchange disclose their voluntary anti-corruption activities to promote sustainable developments. They are encouraged by The Securities and Exchange Commission Thailand (SEC) to participate in anti-corruption activities. The self-assessment report about

anti-corruption activities performed by the listed firm will be reviewed and scored. The final pathway for this encouragement is to create shared value.

According to stakeholder theory, a firm should create value for all stakeholders including public groups, regulators, customers, or suppliers. A firm is a relationship between the various contracts or demands of multiple stakeholders. Those different interests from stakeholders must be aligned with the firm strategic plan to accomplish its strategic outcome (Freeman & McVea, 2001). A firm can deliver information of its anti-corruption exercises through social disclosure-one mechanism for a firm to create implicit contract, i.e. a social reputation (Ruf et al., 2001)

and use such contracts to bond stakeholder demands. We posit that one mode for a firm to synchronise stakeholder interests is to participate in anti-corruption activities. That is, the lower variation of stakeholder demands through anti-corruption activities should mitigate information asymmetry, particularly agency problem. Therefore, we should observe the difference of agency cost levels between anti-corruption participating and non-anti-corruption participating firms. We argue that anti-corruption activities should reflect the spending of agency costs. For example, administrative expenses should not be overspent. The main objective of this study is to add much needed empirical evidence on the reporting of anti-corruption and agency cost in Thai settings. We empirically test the relation between anti-corruption and agency cost. Our findings suggest that agency cost can reflect the anti-corruption activity. In addition, our results show that the persistence of earnings for the firm participating in anti-corruption activities is more pronounced relative to the counterparts. The implication from this study has twofold. First, this study adds to the literature for the first time on the link between anti-corruption mechanism and agency cost. We are able to explain that the participation in anti-corruption activities does not induce superfluous internal expenses for the firm. Therefore, we suggest that it does not generate an extra cost for a firm to promote anti-corruption activities in its organisation. Second, the mitigation of agency problem in a firm induces the higher quality

financial information (Sun et al., 2012). This study shows that the higher earnings quality level is observed for a firm participating in anti-corruption activities. Our results also add to the recent literature on the relation between earnings quality and anti-corruption activities.

The remainder of this study is organised as follows: Section 2 provides a literature review and outlines the development of our hypothesis. Section 3 addresses data set and formulates the models. Section 4 reports the results and Section 5 concludes.

## Objectives

This research is to investigate the connection between anti-corruption activities and agency costs in Thai settings. This research area in emerging market environments is rare. In addition, it is to study the quality of earnings information for the firm with different anti-corruption activities.

## Literature Review

Anti-corruption in practice for Thai listed firms: Since 2004, the National Corporate Governance Committee of Thailand has approved a plan of corporate governance development. The plan has been taken in action continuously aiming to raise the level of Thai corporate governance. As a result, Thai corporate governance for listed firms can be reached to the leading level among ASEAN countries and it has been ranked in the third place in Asia. However, there are more issues to be done for Thai listed firms. SEC, then, focuses on three aspects of the sustainability

development for Thai listed firms. Among three aspects, anti-corruption in practice has been enacted to promote anti-corruption culture in Thai private sector known as Thailand's Private Sector Collective Action Coalition Against Corruption (CAC). CAC is endorsed by the government and the Office of National Anti-corruption Commission. To measure the anti-corruption in practice for listed firms, SEC evaluates the self-assessment from the listed firm. The listed firm is required to disclose their important policy and measurement for the anti-corruption practice in their annual report, Form 56-1: SEC Annual Registration Statements, and Form 69-1: Registration Statements for sale of security. The commitment level of anti-corruption is divided into three categories-declared, certified, and non-participation. The firm's anti-corruption commitment can be found on the SEC website.

Agency cost and Anti-corruption: The internal costs arising from the acting of agent on behalf of principals have been attracted by many empirical research studies. Those internal costs are viewed as agency costs and used for compensating the conflicts of interest probably occurred in the firm. The internal cost can include any expense that is associated with handling the relationship between two parties—i.e. shareholders and management and resolving the differing interests between them. In accordance with agency theory, which suggests that the corporate governance mechanism plays an important role in determining the outcome of principal-agent

conflicts, a large literature often uses many streams of corporate governance mechanism such as ownership structure (Cai et al., 2015; Singh & Davidson, 2003), board size (Owusu & Weir, 2017), and other monitoring tools to explain agency problems in a firm. As aforementioned in the previous section, the anti-corruption is one key of firm's sustainability developments; it could be accounted as a current attempt of the firm for the future outcome (Ni & Zongyi, 2018). It is risky for a firm that engages in any corruption activity. The corruption activity is costly to the firm. It is more likely to use a large number of firm resource spending to obtain any particular purposes. Since the anti-corruption participation is a voluntary program for the firm, we argue that it can be considered as one monitoring tool to mitigate the principal-agent conflicts in the voluntary firm, even if the participation incurs transaction costs, i.e. certification fees, to the firm. As information disclosure is a tool designed to help convey firm inside information to the public (Borghei et al., 2018) or reduce agency costs (Zhou et al., 2018), we view that the voluntary participation in anti-corruption program could be arisen from the firm motivation and regarded as voluntary disclosures of non-financial information for a firm to assert the firm's intention in terms of maintaining its sustainability development. Theoretical and empirical research examines the relationship between the anti-corruption and corporate governance mechanism (Benyasrisawat, 2019; Shi et al., 2018; Wang et al., 2018). Unlike those previous studies,

however, the particular concern of this paper is to conduct the empirical examination about the agency conflict-resolving role of anti-corruption performance for the firm. In the context of our study, we focus specifically on the variation of anti-corruption in practice at the firm level and the agency cost. Recent archival studies find evidence of the association between anti-corruption and corporate governance factors. Therefore, in our context, corporate governance proxies are also included as additional variables to assert the results from existing studies in a Thai context. First, among related factors, we view that the connection between the firm decision to join the anti-corruption voluntary program and agency costs can be reflected in resource spending. As reflected on firms' financial statements, Singh and Davidson (2003) suggest that the higher spending firm resources is the higher agency conflict. Selling, general, and administrative (SG&A) expenses are internal costs and resources that can be spent directly upon the management discretion. Generally speaking, only legalized expenses for business transaction outcomes can be accounted and presented on the financial statement. The firm's spending for bribery, for an extreme example, is not categorized as firm's legalized business transaction but upon the management discretion it could be presented in the different account name on the financial statement to create fake account and avoid the investigation, i.e. auditing. However, we argue that the bribery expense is unobservable. For the other example, political contributions, charitable

contributions, sponsorship, and gift and hospitality expenses are probably firm resource spending rooms under the management discretion that is unobservable. Those spending activities are internal costs and paid to outside parties. They can be accounted on firms' financial statements if they are actually reflected the business transaction outcome. In the meantime, they can be questionable spending resources if their amounts are materially in suspicion. Employee salaries are internal costs paid to internal parties. They are key elements of flowing total benefits to firm management and potentially affected by the anti-corruption activity (Ni & Zongyi, 2018). At least one element in the self-evaluation of the anti-corruption participation asks about human resource aspects, in particular remuneration, promotion, or performance evaluation. As a result, we connect variations in anti-corruption activities to agency costs proxied by SG&A at the firm level. We use SG&A as a direct proxy of agency cost for this study. Second, prior studies suggest that corporate governance is associated with anti-corruption activities. As the anti-corruption activity is voluntary and assessed by the self-evaluation process, the internal process plays an important role to certify the self-evaluation. The firm audit committee is required to certify the self-evaluation of anti-corruption activities. Even though the audit committee is a part of corporate governance, the overall corporate governance performance should reflect the degree of anti-corruption activities. As suggested by Wang et al. (2018) and

Shi et al. (2018), relative to the non-political-connected firms, the corporate governance mechanism is weak in the political-connected firms. However, the corporate governance mechanism is essential for both firms. During the anti-corruption campaign in China, the effective corporate governance can mitigate the potential loss in firm values for both political- connected and non-political-connected firms. Those recent works are conducted in settings that lack direct effects of anti-corruption on corporate governance. In contrast, our dataset is based on the participation in the voluntary obligation rather than the compulsory program regulated by the state authority, which allows us to exploit the variation of anti-corruption levels in corporate roles in Thailand. We specifically examine an incremental role of corporate governance in determining the anti-corruption participation. Finally, we employ the other two variables that capture characteristics of monitoring mechanism. In general, tax strategy is one element influencing firm performance. The corporate tax study examines a stream of tax avoidance and book-tax differences. Prior studies find that the book-tax difference—the gap between book income and taxable income is associated with external monitoring tools such as institutional ownership (Jiménez-Angueira, 2018; Moore, 2012) and cost of debt (Moore & Xu 2018). There is little research that directly examines the association between book-tax differences and anti-corruption. Shi et al. (2018) note that the effective external governance mechanism plays an incremental role for firm

value. With respect to corporate governance mechanism, the market participant is one external force for a firm to properly manage its agency problems. Firm information released to the public is more likely to reduce information asymmetry. In accordance with the empirical research, the outcome of market participant response to the information asymmetry could be observed from the spread between bid and ask share prices as a consensus of the market participant's evaluation. In this paper, we view that the bid-ask spread is another monitoring tool of shareholders to manage the invested firm. Besides, the recent study finds that the anti-bribery law enforcement has positive impact on accrual earnings quality of the firm during 1978-2015 (Greusard & Bunkanwanicha, 2022). We propose two groups of proxy for agency cost. The first proxy is from internal expenses as direct measure of agency cost. The second proxies as indirect measures of agency cost are from governance mechanism including corporate governance, book-tax difference, and bid-ask spread. In order to construct our test, we define the following alternative hypothesis: Anti-corruption level is associated with agency costs.

## Methodology

### Data

The SEC announced the anti-corruption level for firms listed on SET and MAI. The result of anti-corruption level for the listed firm is available and can be accessed any time on the SEC website (<http://market.sec.or.th/public/idisc/en/Ranking/Listed/Score>). This

research retrieved the anti-corruption result for the listed firm on 17 February 2018. From 687 listed firms, 258 and 44 firms listed on SET and MAI, respectively, are either certified or in the declaration stage of their anti-corruption activity. In this analysis, we include all listed firms and divide them into three categories including firms with no anti-corruption activity (or 0), firms with anti-corruption activity at the declaration stage (or 1), and firms with anti-corruption certification (or 2). We obtain financial data and share price during 2011-2016 for the analysis. Data and share prices employed for this study are obtained from the SET market analysis and reporting tool (SETSMART) that is officially provided by SET. After dropping missing data, the testable sample consists of 2,548 firm-year observations.

### Model

As aforementioned, the relationship between anti-corruption and agency cost is the primary concern for this research. We use the anti-corruption as the dependent variable. Independent variables include various agency cost proxies because the true value of agency cost cannot be observed. The first variable is from the firm operating activity. Selling, general, and administration expenses (AGENCY) are employed as the agency cost proxy (Singh & Davidson, 2003). The large amount of AGENCY suggests that firms are more likely to have high agency costs since the firm has a large spending. The expected relationship between AGENCY and anti-corruption levels is negative, meaning that relative to the lower anti-corruption activity level, the firm with higher

anti-corruption activity level should have lower agency cost. The second measure for agency cost is from the market perspective. We use the difference between bid and ask share prices (SPREAD). This proxy can be used to determine the information asymmetry between the market and firm. The large difference suggests that the agency cost is high. Thus, the expected relationship between SPREAD and anti-corruption levels is negative. The next set of agency cost is based on the governance mechanism. The strong governance mechanism should reduce agency costs. We employ Corporate Governance rating (CG) and the proportion of audit committee and independent committee (INDT). The higher corporate governance rating suggests that firms should have good mechanism, resulting in the reduction of agency cost. In addition to the corporate governance rating, the high proportion of independent committee should induce the lower agency cost level. Therefore, the expected relationship between 2 proxies—CG and INDT and the anti-corruption level is positive. The last proxy used in this research is the Book-Tax Difference (BTD). The existing study suggests that Book-Tax Difference has the negative relationship with cost of equity. The higher Book-Tax Difference firm should have lower agency cost relative to the lower Book-Tax Difference firm. As a result, the higher Book-Tax Difference firm should have the higher anti-corruption activity level. We use firm size (SIZE) and industry (INDUS) as control variables. The regression model is operationalized as follows:

$$ACRT_{it} = \alpha_0 + \alpha_1 AGENCY_{it} + \alpha_2 SPREAD_{it} + \alpha_3 CG_{it} + \alpha_4 INDT_{it} + \alpha_5 LTD_{it} + \alpha_6 SIZE_{it} + \alpha_7 INDUS_{it} + \epsilon_{it} \quad (1)$$

where,

$ACRT_{it}$  is anti-corruption score ranging from 0 (low anti-corruption activities) to 2 (high anti-corruption activities) for firm  $i$  at year  $t$ ;

$AGENCY_{it}$  is agency cost measured by selling, general, and administration expenses scaled by total revenue for firm  $i$  at year  $t$ ;

$SPREAD_{it}$  is the difference between bid and ask share prices for firm  $i$  at year  $t$ ;

$CG_{it}$  is corporate governance rating ranging from 0 (the lowest rating) to 5 (the highest rating) for firm  $i$  at year  $t$ ;

$INDT_{it}$  is the sum of audit committee and independent committee divided by the number of non-independent committee for firm  $i$  at year  $t$ ;

$LTD_{it}$  is the logarithm of absolute value of Book-Tax Differences for firm  $i$  at year  $t$ ;

$SIZE_{it}$  is the logarithm of market capitalization for firm  $i$  at year  $t$ ;

$INDUS_{it}$  is indicator variable for 9 industries, including agri-food, resource, technology, finance, consumer product, industrial, service, and rehabilitation for firm  $i$  at year  $t$ ; and

$\epsilon_{it}$  is an error term for firm  $i$  at year  $t$ .

To estimate Equation 1, we employ a censored regression analysis or Tobit regression model with robust standard errors. The Tobit model is designed to estimate linear relationships between variables when there is censoring from below (Left-censoring) in the anti-

corruption activity level (Dependent Variable) ranging from 0 to 2. Firms with neither declaring nor certifying their anti-corruption activities are censored at 0 level. However, we view that those firms might have already engaged in some anti-corruption activities but they cannot reach the anti-corruption activity criteria or they probably have no intention to participate in the voluntary program. In addition to the Tobit model, we also use OLS with fixed effect to control for both industry and time variant and robust standard errors to estimate Equation 1 to assert our results.

## Results

### Main Results

The summary statistics is presented in Table 1. Most sample firms do not participate in the anti-corruption activity as the median of  $ACRT$  is 0. Based on the standard deviation (S.D. = 0.91) and its mean (0.81), the slight variation of anti-corruption activities among firms is observed. The mean and median of  $SG\&A$  ( $AGENCY$ ) are 3.72 and 0.13 and the mean and median of  $SPREAD$  are 0.02 and 0.00, respectively. Most sample firms have average governance rating ( $CG$  Median = 3). The median of  $INDT$  is 0.9, suggesting that the proportion number of independent committee and non-independent committee of sample firms is relatively similar. The book-tax difference and size of sample firms are not noticeably varied.



Table 1 Descriptive Statistics

Variables	Mean	Median	S.D.	N
ACRT	0.81	0.00	0.91	2548
AGENCY	3.72	0.13	50.78	2548
SPREAD	0.02	0.00	0.04	2548
CG	2.43	3.00	1.83	2548
INDT	1.10	0.90	0.74	2548
BTD	11.42	11.32	1.96	2548
SIZE	21.97	21.71	1.70	2548

ACRT is anti-corruption score ranging from 0 (low anti-corruption activities) to 2 (high anti-corruption activities); AGENCY is agency cost measured by selling, general, and administration expenses scaled by total revenue; SPREAD is the difference between bid- and ask- share prices; CG is corporate governance rating ranging from 0 (the lowest rating) to 5 (the highest rating); INDT is the sum of audit committee and independent committee divided by the number of non-independent committee; BTD is the logarithm of absolute value of book-tax differences; SIZE is the logarithm of market capitalization, and N is the number of firm-year observations.

Spearman and Pearson correlations presented in Table 2. Spearman suggests that CG and BTD are correlated with ACRT. Pearson correlation suggests that most of agency cost variables including AGENCY, SPREAD, CG and BTD are statistically correlated with ACRT.

Both Spearman and Pearson suggest that INDT is not statistically correlated with the anti-corruption activity. The difference results provided by Spearman and Pearson would suggest that the tested data have linear rather than monotonic relationship.



**Table 2** Correlation: Spearman and Pearson correlations are presented in the above and below diagonals, respectively.

Variables	ACRT	AGENCY	SPREAD	CG	INDT	BTD	SIZE
ACRT		-0.04	0.07	0.41	-0.01	0.29	0.32
<i>p-value</i>		0.03	0.00	0.00	0.58	0.00	0.00
AGENCY	0.00		-0.04	-0.04	0.02	-0.15	-0.12
<i>p-value</i>	0.93		0.05	0.04	0.27	0.00	0.00
SPREAD	0.00	-0.01		0.13	0.00	0.17	0.34
<i>p-value</i>	0.97	0.63		0.00	0.86	0.00	0.00
CG	0.36	0.05	0.01		-0.05	0.30	0.38
<i>p-value</i>	0.00	0.02	0.70		0.02	0.00	0.00
INDT	0.01	-0.02	0.02	-0.05		-0.03	-0.03
<i>p-value</i>	0.59	0.24	0.32	0.01		0.12	0.08
BTD	0.31	0.05	0.09	0.26	0.00		0.67
<i>p-value</i>	0.00	0.01	0.00	0.00	0.84		0.00
SIZE	0.34	0.05	0.20	0.34	-0.01	0.704	
<i>p-value</i>	0.00	0.01	0.00	0.00	0.53	0.00	

ACRT is anti-corruption score ranging from 0 (low anti-corruption activities) to 2 (high anti-corruption activities); AGENCY is agency cost measured by selling, general, and administration expenses scaled by total revenue; SPREAD is the difference between bid- and ask- share prices; CG is corporate governance rating ranging from 0 (the lowest rating) to 5 (the highest rating); INDT is the sum of audit committee and independent committee divided by the number of non-independent committee; BTD is the logarithm of absolute value of book-tax differences; SIZE is the logarithm of market capitalization, and N is the number of firm-year observations.

Table 3 presents results of analysis. Based on Tobit model shown in Panel A, the primarily interested variables are statistically significant. The negative coefficients on SG&A and bid-ask spread show that the anti-corruption activity is negatively related to the level in both accounts. Both relationships are statistically significant. The positive coefficients on the remaining variables indicate that the anti-corruption activity increases significantly with corporate governance, the proportion of independent committee and non-independent committee, and Book-Tax Difference. We use OLS to estimate the model as presented

in Panel B. The results from both estimations are qualitatively similar. The result supports our expectation about the relation between anti-corruption activities and agency costs.

#### Additional Analysis

For our additional analysis, we add several proxies as control variables on the model. We include the effective tax rate measured by income tax expenses paid in cash divided by net profit, firm growth measured by the ratio of total market value to total asset (or Q ratio), and leverage measured by total debt to total asset. We also estimate the additional analysis with these control variables by using

Tobit model and OLS fixed effect with robust standard errors. Untabulated results are qualitatively consistent with the main result from both estimation methods. For Tobit model, the additional variables are not statistically significant but the primary variables interested remain qualitatively unchanged with the similar expected sign. For OLS with fixed effect, the additional result show that only firm growth is not statistically significant while other interested variables are statistically significant at .05 and .10 level with the similar expected sign. In addition to adding control variables,

we estimate earnings quality through the persistence of earnings information. We suggest that the firm with higher anti-corruption activity level should have the higher earnings persistence. To estimate the persistence of earnings, earnings are divided into accrual and free cash flow. Free Cash Flow (FCF) is measured by the sum of cash flow from operation and cash flow from investment (Dechow & Ge, 2006). Accrual (ACC) is measured by the difference between net profit and free cash flow. We operationalise the regression model as follows.

**Table 3** Main Results

Variables	Panel A			Panel B		
	Censored regression analysis with robust standard errors			Fixed effect regression analysis with robust standard errors		
	Coefficient	t-value	p-value	Coefficient	t-value	p-value
Constant	-4.824	-10.13	0.000	-2.311	-10.38	0.000
AGENCY	-0.002	-1.92	0.054	-0.001	-1.96	0.050
SPREAD	-2.061	-2.97	0.003	-1.010	-3.43	0.001
CG	0.243	12.72	0.000	0.124	13.58	0.000
INDT	0.077	1.91	0.057	0.048	2.39	0.017
BTD	0.087	3.61	0.000	0.044	4.01	0.000
SIZE	0.179	6.21	0.000	0.104	7.82	0.000
Indicator variables (INDUS) for 9 industries are included.			Indicator variables (INDUS) for 9 industries are included.			
N	2548		N	2548		
Pseudo R <sup>2</sup>	0.102		Adj. R <sup>2</sup>	0.265		

ACRT is anti-corruption score ranging from 0 (low anti-corruption activities) to 2 (high anti-corruption activities); AGENCY is agency cost measured by selling, general, and administration expenses scaled by total revenue; SPREAD is the difference between bid- and ask- share prices; CG is corporate governance rating ranging from 0 (the lowest rating) to 5 (the highest rating); INDT is the sum of audit committee and independent committee divided by the number of non-independent committee; BTD is the logarithm of absolute value of book-tax differences; SIZE is the logarithm of market capitalization; INDUS is indicator variable for 9 industries, and N is the number of firm-year observations.

## Main results

$$\begin{aligned} ACRT_{it} = & \alpha_0 + \alpha_1 AGENCY_{it} + \alpha_2 SPREAD_{it} + \alpha_3 CG_{it} \\ & + \alpha_4 INDT_{it} + \alpha_5 LTD_{it} + \alpha_6 SIZE_{it} \\ & + \alpha_7 INDUS + \varepsilon_{it} \end{aligned} \quad (1)$$

$$INCOME_{it} = \gamma_0 + \gamma_1 ACC_{it-1} + \gamma_2 ACC*ACRT_{it-1} + \gamma_3 FCF_{it-1} + \gamma_4 FCF*ACRT_{it-1} + \varepsilon_{it} \quad (2)$$

$$INCOME_{it} = \delta_0 + \delta_1 FCF_{it-1} + \delta_2 FCF*ACRT_{it-1} + \varepsilon_{it} \quad (3)$$

where,

$INCOME_{it}$  is net profit for firm  $i$  at year  $t$  scaled by total asset of year  $t-1$ ;

$FCF_{it-1}$  is free cash flow for firm  $i$  at year  $t-1$ , measured by the sum of net cash flow from operation and net cash flow from investment scaled by total asset of year  $t-1$ ;

$ACRT_{it-1}$  is anti-corruption levels for firm  $i$  at year  $t-1$  ranging from 0 (low anti-corruption activities) to 2 (high anti-corruption activities); and

$ACC_{it-1}$  is accrual for firm  $i$  at year  $t-1$ , measured by the difference between net income and free cash flow scaled by total asset of year  $t-1$ .

From Equation 2 and 3, we interact the anti-corruption activity level with accrual and free cash flow. This is to analyze whether earnings persistence is varied in the firm with different levels of anti-corruption activities. The primarily interested coefficients are  $\gamma_2$ ,  $\gamma_4$ , and  $\delta_2$ . They are expected to be less than 1 with positive sign.

Results of earnings quality estimation are presented in Table 4. As expected, the result in Panel A reveals that relative to the lower anti-corruption activity level, accrual ( $ACC*ACRT$ ) and free cash flow ( $FCF*ACRT$ ) are of higher earnings persistence for the firm with higher anti-corruption activity level. For Panel B, free cash flow in both firms with low ( $FCF$ ) and high ( $FCF*ACRT$ ) anti-corruption activity levels is statistically significant. However, the persistence of firms with high level of anti-corruptions (0.079) is more pronounced than that of firms with low level of anti-corruptions (0.007).

**Table 4** Additional Analysis: The fixed effect regression analysis with robust standard errors

	Constant	ACC	ACC*ACRT	FCF	FCF*ACRT	Adj.R <sup>2</sup>	N
<b>Panel A:</b> $INCOME_{it} = \gamma_0 + \gamma_1 ACC_{it-1} + \gamma_2 ACC*ACRT_{it-1} + \gamma_3 FCF_{it-1} + \gamma_4 FCF*ACRT_{it-1} + \varepsilon_{it}$							
Coefficient	0.051	0.002	0.155	0.009	0.218		
t-value	5.10	0.03	2.02	0.080	3.010	0.082	1904
p-value	0.000	0.975	0.044	0.860	0.003		
<b>Panel B:</b> $INCOME_{it} = \delta_0 + \delta_1 FCF_{it-1} + \delta_2 FCF*ACRT_{it-1} + \varepsilon_{it}$							
Coefficient	0.061			0.007	0.079		
t-value	9.340			1.880	3.160	0.069	1904
p-value	0.000			0.060	0.002		

$INCOME_{it}$  is net profit for firm i at year t scaled by total asset of year t-1;  $FCF_{it-1}$  is free cash flow for firm i at year t-1, measured by the sum of net cash flow from operation and net cash flow from investment scaled by total asset of year t-1;  $ACRT_{it-1}$  is anti-corruption levels for firm i at year t-1 ranging from 0 (low anti-corruption activities) to 2 (high anti-corruption activities);  $ACC_{it-1}$  is accrual for firm i at year t-1, measured by the difference between net income and free cash flow scaled by total asset of year t-1; N is the number of firm-year observations.

## Discussion

Numerous studies have examined the association between agency cost and different measures. This paper focuses one of the potentially important aspects through which the agency cost is related to the voluntary activity performed by firms. Based on our proxies, results show that the voluntary activity through anti-corruption programme can mitigate agency cost. In other word, the participation in anti-corruption activities is more likely to reduce principal-agent conflicts. Our findings show that relative to the higher agency cost firm, the lower agency cost is observed in the firm that participates in the anti-corruption programme. Our results are consistent with prior studies suggesting that the corporate social responsibility, in particular

voluntary activities, is a mean to mitigate the agency problems. Wang et al. (2021) suggest that the agency conflict is negatively related with corporate social responsibility. Zhang et al. (2021) reveal that the agency problem is more likely to declined when a firm chooses to use dual audit comparing to single audit. Ceustermans and Breesch (2017) suggest that the voluntary activity, in particular the voluntary disclosure, has been participated by the small firm to reduce agency problems. Additionally, Huang (2022) finds that earnings management is less likely to be observed in a firm with high agency problem. This is consistent with our additional findings suggesting that firm participating in anti-corruption activities is more likely to have higher quality of earnings information. In practice, anti-corruption efforts have

been included in the company's strategy to reduce potential risks. In addition, employees at all levels understand the company's anti-corruption policy based on the National Anti-Corruption Commission (NACC) (The Siam Cement Public Company Limited, 2021) Therefore, we argue that encouraging the firm in emerging market environments to participate in the anti-corruption programme should be strictly promoted.

### Conclusion

This study draws on agency problem to investigate the relation between anti-corruption and agency costs in Thai settings. We anticipate that the activity relating anti-corruptions does not induce the agency cost. We also explore the earnings quality and anti-corruption activities. We employ different measures to proxy agency cost. Our findings suggest that the high level of anti-corruption

activities spends low internal expenses. Information asymmetry is lower for the firm with high level of anti-corruption activities. We conclude that a firm participating in anti-corruption activities is more likely to have low agency problem and good corporate governance mechanism. In addition, a firm participating in anti-corruption activities is more likely to have high quality earnings information. This study is limited by the measures of agency costs because the agency problem is probably not directly observed. Based on the firm's perspective, our results suggest that an extra cost is less likely to be incurred from the participation in anti-corruption programme promoted by Thai regulators. The participation of anti-corruption activities mitigates the information asymmetry and should encourage the business sustainability as expected by the regulator.

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