



Effects of agency costs on the relationship between tax avoidance and firm value: A case of Chinese companies

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ABSTRACT

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This study aims to examine the impact of agency costs on the relationship between tax avoidance and firm value in Chinese companies. Generally, a positive relationship exists between corporate tax avoidance and firm value when a company's internal controls are robust and managerial incentives towards shareholder rights are significant. However, engaging in tax avoidance doesn't guarantee an automatic improvement in firm value. Companies need to carefully evaluate the revenue generated and the costs incurred due to agency issues when making tax-avoidance decisions that benefit the company's growth. The main findings of the study are as follows: First, there is a statistically significant positive relationship between tax avoidance and firm value. This implies that the tax savings resulting from tax avoidance lead to an increase in firm value, either through efficient investment or through higher shareholder returns. Second, as CEO (Chief Executive Officer) agency costs increase, the relationship between tax avoidance and firm value is attenuated. This suggests that the tax savings from tax avoidance are offset by CEO agency costs, or that the purpose of tax avoidance is related to opportunistic behaviour rather than increasing firm value. The findings of this study highlight the importance of enhancing corporate governance to decrease agency costs and the significance of reducing information asymmetry between internal and external entities within the company. This will help effectively utilize tax savings from tax avoidance for firm investment.

Contribution/Originality: This study seeks to present empirical evidence supporting a positive correlation between tax avoidance and firm value. It also aims to examine the role of agency costs as a moderating variable, providing a new perspective on how corporate governance dynamics influence the relationship between tax strategies and firm performance.

1. INTRODUCTION

Tax avoidance is a financial strategy that aims to optimize a company's fiscal responsibilities within the framework of applicable tax laws. This approach is designed to minimize the outflow of corporate resources, increase operational efficiency, refine industry dynamics, optimize investment strategies, promote enterprise growth, and ultimately maximize overall value while ensuring full compliance with tax regulations.

Corporate tax avoidance serves a dual purpose: it aims to reduce operational costs, helping companies gain a competitive edge and improve profitability. Tax avoidance also reduces the burden of repaying corporate debt, which in turn reduces overall financial shortfalls. The academic discourse on this subject presents varying perspectives. [De Simone and Stomberg \(2012\)](#) posit that continued tax avoidance activities can positively impact a firm's stock price. In contrast, some scholars contend that these actions have the potential to diminish a company's inherent value. [Hanlon and Slemrod \(2009\)](#) study found that firms associated with aggressive tax avoidance practices suffered a decline in stock prices, particularly among smaller enterprises. This range of perspectives highlights the intricate connection between tax avoidance and a company's overall value.

Against this backdrop, the study investigates the complex link between corporate tax avoidance and a firm's value. Additionally, we examine how agency costs, resulting from the inherent conflicts of interest between shareholders and managers, impact this relationship. When managers' interests align with those of shareholders, agency costs tend to lessen. In these circumstances, proficient management of tax obligations could boost a firm's value. On the other hand, if there is a misalignment of interests, individuals may resort to tax avoidance to benefit themselves, ultimately harming the firm's value.

This study examines the relationship between corporate tax avoidance and the firm value of Chinese firms listed from 2004 to 2019. We analyze financial statement data using the research model proposed by [Desai and Dharmapala \(2006\)](#). The portion of the difference between accounting profit and taxable profit (BTD) that total accruals cannot account for is what is known as the tax avoidance measure. Asset turnover serves as a proxy for agency costs, endorsing the propositions put forth by [Ang et al. \(2000\)](#) and [Singh and Davidson III \(2003\)](#).

The structure of this study is as follows: Section 2 presents a comprehensive examination of previous studies on corporate tax avoidance, business value, and agency costs. The chapter also outlines the research hypotheses. Section 3 provides a comprehensive explanation of the design of the empirical investigation, encompassing the research model and the techniques employed for measuring variables. Section 4 provides the findings of the empirical analysis, which includes comprehensive descriptive statistics, correlation analysis, and regression analysis data to assess our hypotheses. Section 5 presents a comprehensive summary of the research substance and findings, ultimately leading to the conclusion.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES

2.1. Tax Avoidance and Firm Value

Tax avoidance is the act of reducing a company's tax burden within the limits of the tax laws, often facilitated by competent financial personnel. Tax avoidance is an essential element in minimizing a firm's operating costs and has a significant impact on firm value.

Although the impact of tax avoidance can vary depending on the analytical perspective, the empirical literature largely indicates that corporate tax avoidance behaviour is widespread and generally has a positive impact on firm value. The fact that tax avoidance generally has more positive effects on businesses than negative ones can help to explain this.

Tax avoidance helps companies take advantage of favorable investment opportunities, which ultimately increases firm value. This effect is particularly pronounced when firms face an external borrowing environment that leads to a substantial reduction in borrowing costs, underscoring the positive impact of tax avoidance on firm value.

[Irawan and Turwanto \(2020\)](#) conducted an analysis on the correlation between corporate tax avoidance, tax risk, and firm value. Their research indicates that tax avoidance has a positive impact on firm value. The researchers put forth that through tax avoidance, the firm can acquire additional funds, ultimately increasing its total value for shareholders. [Khuong, Liem, Thu, and Khanh \(2020\)](#) also suggest that corporate tax avoidance can improve cash flows, leading to increased investments and ultimately higher firm value. Tax avoidance is positively correlated with

firm value because it results in increased after-tax income and consequently enhances the value of the firm (Inger, 2014; Khuong et al., 2020; Wang, 2010).

2.2. Agency Costs

The ownership and management separation commonly found in corporate structures leads to agency issues between shareholders and managers, as well as between controlling shareholders and minority shareholders. Ultimately, this results in agency costs. Based on prior research on agency costs, the interest alignment hypothesis, proposed by Jensen and Meckling (1976), indicates that an increase in managerial ownership results in an alignment of interests between managers and shareholders, leading to a likely increase in company value. Shleifer and Vishny (1986) report empirical evidence that higher managerial ownership is associated with improved firm performance, supporting the theory that alignment of managerial and shareholder interests leads to increased firm value. Furthermore, Ang et al. (2000) found in their study that agency costs decrease when managers are shareholders, families hold over 50% of ownership, or the controlling shareholder owns a large stake.

The agency costs between controlling shareholders and minority shareholders often arise from weak systems for protecting the interests of minority shareholders and an inactive external audit framework in many companies. This makes it easier for controlling shareholders to pursue their personal interests (Lee, Kim, & Park, 2005). Lee et al. (2005) reported that horizontal agency problems between minority shareholders and controlling shareholders have a negative impact on firm value. Furthermore, according to the findings presented by Park, Shin, and Choi (2004), as foreign ownership increases, managers' discretionary expenditures decrease, leading to a decrease in firm value. They explained this by suggesting that the reduction in horizontal agency costs due to foreign investment has a positive effect on firm value.

2.3. Research Hypotheses

Tax avoidance is the practice of rational tax planning within the framework of relevant laws and regulations without violating them. It aims to minimise unnecessary outflows of corporate funds, improve the management of production and operations, optimize the industrial structure and investment portfolio of the company, promote the development of the company, and ultimately achieve the goal of maximizing firm value.

Desai and Dharmapala (2009) brought an innovative perspective to the relationship between tax avoidance and firm value. Traditionally, it is argued that a firm's tax avoidance behaviour can increase its value. Simultaneously, firms expect to reduce costs and expenses through rational tax avoidance practices. From the standpoint of a firm, tax avoidance can reduce costs and expenses, aiding in achieving higher profits in competitive markets while also decreasing burdens from investment shortages. As such, tax avoidance is expected to boost firm value.

Conversely, agency costs arise from divergent interests between shareholders and managers. Shareholders seek to maximize profits for the firm, while managers pursue personal interests. Such agency problems may cause inefficiencies in corporate governance, encourage tax avoidance, and potentially decrease firm value (Jensen & Meckling, 1976). Consequently, agency costs should affect the association between tax avoidance and firm value.

These theories and perspectives led to the development of the following hypotheses.

Hypothesis: Tax avoidance behaviour is related to firm value.

Hypothesis: Agency costs affect the relationship between tax avoidance and firm value.

3. MATERIALS AND METHODS

3.1. Measurement of Variables

3.1.1. Dependent Variable: Firm Value

There are two main indicators used to assess the value of a company: financial indicators and market indicators. Financial indicators include measures such as return on assets (ROA), while market indicators include Tobin's Q

(TobinQ). Due to the susceptibility of financial indicators to accounting manipulations and earnings management, this study uses Tobin's Q as a market-based indicator to measure firm value. The specific measurement method is as follows:

Tobin's Q = (End-of-period Market Capitalization + Book Value of End-of-period Total Liabilities) / End-of-period Total Assets

Where,

Market Capitalization = stock price × outstanding shares + net asset value per share × non-trading shares

3.1.2. Independent Variable: Tax Avoidance

In this study, we utilize the [Desai and Dharmapala \(2006\)](#) model to quantify tax avoidance. The unexplained part of the difference between pre-tax accounting income and taxable income (book-tax differences, BTD), broken down by total assets at the start of the period, is what tax avoidance is. This unexplained percentage embodies tax avoidance and is outlined in [Equation 1](#).

$$BTD_{i,t} = \beta_1 TA_{i,t} + \mu_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where,

BTB (Book-Tax Differences): (Pre-tax accounting income – Taxable income) / Beginning-of-period total assets

TA (Total Accruals): (Net income (or Earnings before tax) – Cash flows from operating activities on the cash flow statement) / Beginning-of-period total assets

$\mu+\varepsilon$: Tax avoidance measure, in detail, the definitions of the tax evasion variables are as [Equation 2](#).

$$TA_{i,t} = \mu_{i,t} + \varepsilon_{i,t} \quad (2)$$

3.1.3. Moderating Variable: Agency Costs

Measuring agency costs directly is challenging. Therefore, this study uses the asset turnover ratio as a proxy for agency costs, following the approach used in previous studies, including [Ang et al. \(2000\)](#), [Singh and Davidson III \(2003\)](#), and [Park and Yoon \(2017\)](#).

The asset turnover ratio measures how efficiently a firm uses its assets and provides insights into inefficiencies related to investment decisions, managerial efforts, private consumption, and the increase in unproductive assets ([Park & Yoon, 2017](#)). [Ang et al. \(2000\)](#) proposed the total asset turnover ratio as a financial indicator to effectively measure the level of agency costs between shareholders and managers, taking into account the efficient use of assets and effective control of unnecessary expenses. A higher total asset turnover ratio generally indicates lower agency costs ([Ang et al., 2000](#); [Singh & Davidson III, 2003](#)). [Xu et al. \(2015\)](#) also used asset turnover ratio to measure agency costs arising from Type I agency problems between shareholders and managers. They argued that asset turnover ratio provides a view of agency costs from the perspective of management's operational inefficiencies. According to these previous studies, the asset turnover ratio was calculated as [Equation 3](#).

$$\text{Asset Turnover Ratio} = \text{Sales} / \text{Total Assets} \quad (3)$$

In general, a higher asset turnover ratio indicates a faster turnover of a company's assets and lower agency costs. In this study, a dummy variable called *Agency* was defined and takes a value of 1 if the asset turnover ratio is in the top 25% and 0 otherwise. In addition, to examine the moderating effect of agency costs, an interaction variable $TA \times Agency$ was included. If the coefficient of $TA \times Agency$ is positive (+), it means that a higher asset turnover ratio or lower agency costs strengthens the relationship between a company's tax avoidance and its firm value.

3.1.4. Control Variables

In addition to the explanatory variables such as tax avoidance measure (*TA*) and *Agency*, the study used a number of control variables that affect firm value. These control variables include firm size (*SIZE*), leverage ratio (*LEV*), firm age (*AGE*), state ownership status (*SOE*), sales growth rate (*GROWTH*), book-to-market ratio (*BM*), as well as year dummies ($\sum YEAR$) and industry dummies ($\sum INDUSTRY$).

3.2. Research Model

The study proposes research models to analyze the impact of corporate tax avoidance on firm value. Equation 4 is presented to examine the influence of corporate tax avoidance on firm value. Equation 5 is used to examine the impact of agency costs on the relationship between corporate tax avoidance and firm value.

$$\text{Tobin}Q_{i,t} = \alpha_0 + \beta_1 TA_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 AGE_{i,t} + \beta_5 SOE_{i,t} + \beta_6 BM_{i,t} + \beta_7 GROWTH_{i,t} + \sum YEAR + \sum INDUSTRY + \varepsilon_{i,t} \quad (4)$$

$$\text{Tobin}Q_{i,t} = \alpha_0 + \beta_1 TA_{i,t} + \beta_2 Agency_{i,t} + \beta_3 TA_{i,t} \times Agency_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 LEV_{i,t} + \beta_6 AGE_{i,t} + \beta_7 SOE_{i,t} + \beta_8 BM_{i,t} + \beta_9 GROWTH_{i,t} + \sum YEAR + \sum INDUSTRY + \varepsilon_{i,t} \quad (5)$$

Here are the definitions of the variables.

TobinQ: Firm value measure, described in section 3.1.1 of this study.

TA: Tax avoidance measure, described in section 3.1.2 of this study.

Agency: A dummy variable that takes the value of 1 if the asset turnover ratio is in the top 25% and 0 otherwise; refer to section 3.1.3.

SIZE: Firm size, the natural logarithm of total assets.

LEV: Leverage ratio, calculated as total debt divided by total assets.

AGE: Firm age, the natural logarithm of the firm's age.

SOE: State ownership, a dummy variable that takes the value of 1 if the firm is state-owned and 0 otherwise.

BM: Book-to-market ratio, calculated as the ratio of book value to market value.

GROWTH: Sales growth rate, calculated as the change in sales from the current year to the previous year, divided by the previous year's sales.

$\sum YEAR$: Year dummy.

$\sum INDUSTRY$: Industry dummy.

3.3. Sample Selection

The study selected a sample of A-share companies listed on the China Stock Exchange over a period of 15 years, from 2004 to 2019. To enhance comparability within the sample, financial institutions and companies with insufficient data for empirical analysis were excluded. In the end, the sample used for the empirical analysis consisted of 28,026 firm-year observations. Table 1 presents the industrial distribution of the sample. Among the total samples, the manufacturing sector accounts for the largest share with 62.82%. This is followed by wholesale and retail, information transmission, software and information technology services, and real estate with 6.05%, 5.43%, and 5.11%, respectively. Furthermore, the education sector has the smallest share in the whole sample, accounting for only 0.06%.

Table 1. Samples distribution by industry.

Industry	Freq.	Percent
Farming, forestry, animal husbandry, and fishery	388	1.38
Mining	686	2.45
Manufacturing	17,605	62.82
Production and supply of electric power, thermal power, gas, and water	1,045	3.73
Construction	763	2.72
Wholesale and retail	1,696	6.05
Transport, storage, and postal	1,015	3.62

Industry	Freq.	Percent
Hotels and catering	112	0.40
Information transmission, software, and information technology service	1,522	5.43
Real Estate	1,431	5.11
Leasing and business service	354	1.26
Scientific research and technology service	208	0.74
Water, environment, and public facility management	313	1.12
Residential service, repair, and other service	50	0.18
Education	16	0.06
Health and social work	50	0.18
Culture, sport, & entertainment industry	302	1.08
Others	470	1.68
Totals	28,026	100.00

4. RESULTS

4.1. Descriptive Statistics and Univariate Analysis

The study analyzes the correlation between corporate tax avoidance and firm value. Table 2 displays descriptive statistics for key variables, comprising firm value, tax avoidance level, agency costs, and control variables. The results include sample size (N), mean (Mean), standard deviation (SD), median (Median), minimum (Min), and maximum (Max).

For the dependent variable, firm value (*TobinQ*), the mean and median are 1.947 and 1.546, respectively, both greater than 1. This indicates that, on average, most firms perform well. The standard deviation is 1.200, indicating a relatively large variation in firm value across companies and years, ranging from a minimum of 0.884 to a maximum of 7.915. For the independent variable, tax avoidance (*TA*), both the mean and median are 0.000, with a standard deviation of 0.017. This suggests that the overall level of tax avoidance among companies is relatively low. The minimum and maximum values are -0.058 and 0.065, respectively. For the moderating variable, *Agency*, the mean and median are 0.750 and 1, indicating that companies with asset turnover ratios in the top 25% account for about 75% of the total sample.

When examining the control variables, the following descriptive statistics are observed: For *SIZE*, the mean and median are 22.040 and 21.860, respectively, indicating that there isn't a significant difference between these two values. This suggests that there is no significant variation in company size within the selected sample. *AGE*, the standard deviation is 0.398, the median is 2.733, and the mean is 2.737. These statistics indicate that there is relatively little variation in company age within the sample. For *LEV*, the standard deviation is 0.203, the median is 0.436, and the mean is 0.437. This suggests that, overall, most firms in the sample have a reasonably well-controlled level of leverage. The mean for *SOE* is 0.428, indicating that SOEs account for approximately 42.8% of the total sample. For *BM*, the standard deviation is 1.157, the median is 0.684, and the mean is 1.036. These values indicate the variation in the book-to-market ratio across companies. For *GROWTH*, the standard deviation is 0.398, the median is 2.773, and the mean is 2.737, indicating some variability in sales growth rates across companies.

Table 2. Descriptive statistics (N=27,426).

Variables	Mean	SD	Median	Min.	Max.
TobinQ	1.947	1.200	1.546	0.884	7.915
TA	0.000	0.017	0.000	-0.058	0.065
Agency	0.750	0.433	1	0	1
SIZE	22.040	1.323	21.860	14.160	28.640
LEV	0.437	0.203	0.436	0.054	0.888
AGE	2.737	0.398	2.733	0.693	4.127
SOE	0.428	0.495	0.000	0.000	1.000
BM	1.036	1.157	0.684	0.001	20.960
GROWTH	2.737	0.398	2.773	0.693	4.127

Table 3 shows the results from the correlation analysis of the key variables. The measure of tax avoidance (TA) and firm value ($TobinQ$) are significantly and positively correlated at the 1% level. That is to say, as tax avoidance increases, firm value tends to increase. Additionally, $Agency$, measured by asset turnover, also exhibits a significant positive correlation with firm value ($TobinQ$) at the 1% level. Higher asset turnover is positively linked with lower agency expenses and greater firm value.

Firm value ($TobinQ$) shows significant positive correlations at the 1% level with the control variables firm age (AGE) and sales growth rate ($GROWTH$). This indicates that firm value tends to be higher for older firms and firms with higher sales growth rates. On the other hand, firm value ($TobinQ$) has significant negative correlations at the 1% level with firm size ($SIZE$), leverage ratio (LEV), state ownership status (SOE), and book-to-market ratio (BM). This implies that larger firms, firms with higher leverage ratios, state-owned firms, and firms with lower book-to-market ratios tend to have lower firm values.

Table 3. Pearson correlation analysis.

Variables	TobinQ	TA	Agency	SIZE	LEV
TobinQ	1				
TA	0.039***	1			
Agency	0.033***	0.006	1		
SIZE	-0.361***	-0.019***	-0.073***	1	
LEV	-0.278***	-0.073***	0.014**	0.423***	1
AGE	0.059***	0.002	-0.082***	0.208***	0.108***
SOE	-0.167***	-0.001	-0.012**	0.274***	0.269***
BM	-0.438***	-0.047***	-0.106***	0.569***	0.518***
GROWTH	0.029***	0.000	0.054***	0.008	0.085***
Variables	AGE	SOE	BM	GROWTH	
AGE	1				
SOE	0.021***	1			
BM	0.116***	0.266***	1		
GROWTH	-0.029***	-0.042***	-0.027***	1	

Note: ** and *** indicate significance at 10%, and 5% levels, respectively.

4.2. Regression Analysis

Table 4 displays the outcomes of OLS (Ordinary Least Squares) regression analysis to confirm the influence of corporate tax avoidance on firm value. The regression coefficient between tax avoidance (TA) and firm value ($TobinQ$) is 2.361; it is statistically significant at the 1% level, thereby indicating a positive association. Specifically, as the level of tax avoidance rises, the firm value tends to increase. In addition, the variable $Agency$ is used as a dummy variable to represent firms with asset turnover ratios in the top 25% (coded as 1) versus those who do not (coded as 0).

The asset turnover ratio is used as a proxy for agency costs, where low turnover ratios indicate high agency costs and high turnover ratios indicate low agency costs. The regression coefficient β_3 for the interaction variable $TA \times Agency$ is 2.562, indicating a statistically significant level of 1%. This variable represents the interaction between the level of corporate tax avoidance and agency costs. The increase in asset turnover ratio implies lower agency costs, thereby strengthening the positive relationship between corporate tax avoidance level and firm value. These findings support hypotheses 1 and 2.

Among the controlled variables, firm age (AGE), state ownership status (SOE), and sales growth rate ($GROWTH$) all have statistically significant positive (+) coefficients. The firm value is higher for SOEs. In addition, firm size ($SIZE$), leverage ratio (LEV), and book-to-market ratio (BM) also show a statistically negative (-) relationship, meaning that the larger the firm size, the higher the leverage ratio, or the higher the book-to-market ratio, the lower the firm value.

Table 4. Results of the OLS regression.

Variables	Model 1		Model 2	
	Coef.	t	Coef.	t
Intercept	7.068***	49.39	7.060***	49.28
TA	2.361***	6.76	0.346	0.46
Agency			0.007	0.48
TA×Agency			2.562***	3.03
SIZE	-0.283***	-45.29	-0.282***	-45.25
LEV	-0.210***	-5.55	-0.211***	-5.55
AGE	0.206***	11.27	0.206***	11.28
SOE	0.064***	4.72	0.064***	4.69
BM	-0.163***	-22.66	-0.163***	-22.62
Growth	0.066***	5.91	0.065***	5.87
∑YEAR & ∑INDUSTRY	Included		Included	
F-stat.	369.01***		352.55***	
Adj.R ²	0.3604		0.3606	
N	27,426			

Note: *** indicate significance at 10% levels, respectively.

4.3. Additional Analysis

Additional analyses were conducted to test the robustness of the hypothesis testing results. Table 5 presents the regression analysis results for the relationship between the level of corporate tax avoidance and the value of the company one year later. The analysis shows a significant positive relationship between tax avoidance (*TA*) and the firm value one year later, with the regression coefficient between them being 2.343 and statistically significant at the 1% level. The study suggests that the degree of tax avoidance significantly affects firm value. Also, the variable that shows the interaction between tax avoidance and agency costs (*TA*×*Agency*) was looked at. Its regression coefficient is 1.645, which means it is significant at the 10% level. Thus, it can be inferred that these results provide support for hypotheses 1 and 2.

Regarding the control variables, the regression coefficients for firm age (*AGE*), state ownership status (*SOE*), and sales growth rate (*GROWTH*) are all statistically significant and positive, indicating their impact on the value of the firm one year later. The regression coefficients for firm size (*SIZE*), leverage ratio (*LEV*), and book-to-market ratio (*BM*) on firm value one year later are all statistically significant at the 1% level. This suggests a significant negative relationship.

Table 5. Results of the OLS regression: TobinQ_{t,t+1}.

Variables	Model 1		Model 2	
	Coef.	t	Coef.	t
Intercept	7.355***	45.06	7.366***	45.08
TA	2.343***	5.69	1.047	1.18
Agency			-0.035**	-2.02
TA×Agency			1.645*	1.65
SIZE	-0.284***	-39.66	-0.284***	-39.60
LEV	-0.266***	-6.18	-0.255***	-5.89
AGE	0.166***	8.10	0.165***	8.06
SOE	0.028*	1.81	0.029*	1.91
BM	-0.170***	-19.09	-0.172***	-19.22
Growth	0.024**	1.96	0.026**	2.13
∑YEAR & ∑INDUSTRY	Included		Included	
F-stat.	278.14***		265.42***	
Adj.R ²	0.3210		0.3212	
N	24,032			

Note: *, **, and *** indicate significance at 10%, 5%, and 1% levels, respectively.

Furthermore, to ensure the validity of the hypothesis testing results, a regression analysis was performed, as depicted in Table 6. The regression coefficient between the variables tax avoidance (TA) and firm value two years later is 2.305, which proves to be statistically significant at the 1% level. This shows that there is a significant positive relationship between tax avoidance and firm value, providing support for hypothesis 1.

When examining the effect of the interaction variable between tax avoidance and agency costs, $TA \times Agency$ is not statistically significant. This implies that while reduced agency costs may have a positive impact on a firm's value in the short run for firms that engage in tax avoidance behavior, it is not effective in the long run. The results suggest that a firm's tax avoidance behavior has a limited effect on reducing agency costs.

Among the controlled variables, firm age (AGE) shows statistically significant positive (+) coefficients. The firm value is higher for older firms. Firm size ($SIZE$), leverage ratio (LEV), and book-to-market ratio (BM) show a statistically negative (-) relationship, which means that the larger the firm size, the higher the leverage ratio, or the higher the book-to-market ratio, the lower the firm value. However, no statistical significance was found in the relationship between state ownership status (SOE) and firm value, nor was there a statistically significant relationship between sales growth rate ($GROWTH$) and firm value.

Table 6. Results of the OLS regression: Tobin $Q_{t,t+2}$

Variables	Model 1		Model 2	
	Coef.	t	Coef.	t
Intercept	7.779***	42.38	7.810***	42.53
TA	2.305***	4.77	3.177***	3.03
Agency			-0.077***	-3.90
TA×Agency			-1.113	-0.95
SIZE	-0.274***	-33.75	-0.273***	-33.67
LEV	-0.394***	-8.16	-0.374***	-7.69
AGE	0.105***	4.64	0.103***	4.57
SOE	-0.024	-1.41	-0.021	-1.21
BM	-0.197***	-17.69	-0.200***	-17.91
GROWTH	-0.016	-1.18	-0.012	-0.90
$\Sigma YEAR$ & $\Sigma INDUSTRY$	Included		Included	
F-stat.	227.45***		217.15***	
Adj.R ²	0.3033		0.3038	
N	20,807			

Note: *** indicate significance at 10% levels, respectively.

5. CONCLUSIONS

In this study, we investigated the impact of a company's tax avoidance on its firm value as well as the moderating effect of agency costs on this relationship.

The statistically significant and positive regression coefficient of TA, which measures a company's tax avoidance at the 1% level, supports the research findings that tax avoidance has a positive impact on firm value. As a company's tax avoidance opportunities and level increase, it can reduce costs at a 25% tax rate, promote healthy development, and increase its value. Additionally, asset turnover measured agency costs. $Agency$ was defined as a dummy variable, where 1 represents companies in the top 25% in terms of asset turnover and 0 for others. It was discovered that an increase in asset turnover led to a decrease in agency costs, and this reduction in agency costs reinforced the favorable correlation between a firm's level of tax avoidance and its value.

This study reconstructed the theory of tax avoidance and firm value by highlighting the characteristics of asset turnover, an important financial indicator. It provided insight into the factors influencing a firm's tax avoidance level from an agency cost perspective. In addition, it laid the foundation for analyzing the relationship between various factors in a comprehensive firm setting and other accounting research topics beyond tax avoidance.

The present study provides several implications. The findings yield valuable insights for financial practitioners and corporate decision-makers. It is recommended that companies consider implementing tax planning measures within the confines of the law to lower tax liabilities and augment profitability. Policymakers should be aware of the positive correlation between tax avoidance and firm value and emphasize the need to balance promoting economic growth through tax incentives with ensuring tax equity. Investors and stakeholders should consider a company's tax strategies when making investment decisions, particularly in industries where tax planning is crucial.

Nonetheless, this study has certain limitations. The study employs a particular approach to measuring tax avoidance (TA), and varying TA metrics can produce divergent outcomes. Employing asset turnover to represent agency costs oversimplifies the intricate complexity of corporate agency relationships.

Subsequently, future research can expand the analysis to encompass the most recent timeframe to capture potential changes in the association between tax avoidance and firm value across economic cycles. Further, this study recommends investigating alternative approaches for measuring tax avoidance and agency costs in order to more accurately reflect the complexities of corporate governance and how various aspects of tax avoidance impact firm value.

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