Financial Constraints, Tax Enforcement and Tax Avoidance: Evidence from the Chinese Listed Firms

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Abstract: *When the external financing cost is too high, and the internal cash flow of the enterprise is insufficient, the enterprise has to give up some valuable investment activities, and then the enterprise faces the dilemma of financial constraints. Tax avoidance can reduce not only corporate tax obligations but also reduce cash flow expenses. Therefore, there may be stronger tax avoidance motives when companies face financial constraints. This paper selects the Chinese listed companies as the research sample, and conducts an empirical test on the proposed hypothesis. We find that the financial constraints of the overall Chinese listed companies are significantly positively related to tax avoidance. Moreover, the correlation between financial constraints and tax avoidance mainly exists in areas with a low level of tax enforcement. That is, financing-constrained enterprises will choose tax avoidance to improve the shortage of funds, and tax enforcement can effectively curb tax avoidance caused by financial constraints.*

Keywords: *Financial constraints, Enterprise Tax Avoidance, Intensity of Tax Enforcement,*

1. Introduction

Funds are the blood of an enterprise. The problems of enterprise survival, development, operation, and profit are all closely related to enterprise funds. For an enterprise to continue to operate normally, it is necessary to have sufficient funds. In order to ensure the survival and development of an enterprise, financing is a must for almost every enterprise. In the financing process, companies are most concerned about not the source of funds, but the cost of financing. In the actual market, due to widespread information asymmetry and agency problems, the external financing cost of a company is usually higher than the internal financing cost. When the internal cash flow of the enterprise is insufficient and the external financing faces a high premium, this virtually increases the operating pressure of the enterprise. The company must give up some valuable investment projects due to the consideration of financing costs. At this time, the company has fallen into a dilemma of financial constraints (Cheng, Ioannou, and Serafeim, 2014).

Financial constraints are related to the survival and development of an enterprise. Numerous studies have shown that long-term strategic development, capital structure, and stock returns of enterprises are affected by financial constraints (Adam, 2009; Korajczyk and Levy, 2003; Lamont, Polk, and Saaá-Requejo, 2001). Therefore, companies facing financial constraints usually try to adopt various methods to alleviate financial constraints. At present, research on how to alleviate financial constraints is mainly focused on the following three aspects: (1) From a macro perspective, optimizing the financial environment, reducing government intervention, , and improving the capital market are external conditions to alleviate financial constraints. (2) The information asymmetry and agency conflict between the enterprise itself and the market are the main reasons for the enterprise to fall into financial constraints. Therefore, reducing information asymmetry and easing agency conflicts are effective ways for enterprises to resolve financial constraints. (3) Financing-constrained enterprises can solve the problem of insufficient investment by strengthening liquidity management and maintaining liquidity of funds. Both theoretical research and practical experience have proven that: the more severe the financial constraints faced by a company, the higher its demand for liquid assets. Compared to improving the financial environment and mitigating agency conflicts, strengthening liquidity management is an enterprise's own initiative and a more direct and quick response strategy.

There are many ways for enterprises to increase cash flow, such as internal fund-raising,

self-accumulation, borrowing from financial institutions, borrowing from non-financial institutions and enterprises, issuing bonds and stocks to society and tax avoidance. Among them, tax planning is a behavior that can reduce corporate tax obligations and save cash flow (Dyreng, Hanlon, and Maydew, 2008). Corporate tax avoidance can increase corporate net profit after tax and increase internal cash flow, so tax avoidance is also considered as a financing method. When companies face high external financing costs and they cannot obtain the financial support needed for optimal investment expenditures, financing-constrained companies are likely to increase their internal cash flow by avoiding taxes. Although there are abundant research results in the field of tax avoidance, the current research on the influencing factors of tax avoidance mainly focuses on political relations (Kim and Zhang, 2016), corporate social responsibility (Davis, Guenther, Krull, and Williams, 2016; Hoi, Wu, and Zhang, 2013), information environment (Gallemore and Labro, 2015), and tax enforcement level (Desai, Dyck, and Zingales, 2007; Hoopes, Mescall, and Pittman, 2012), enterprise operation strategy (Higgins, Omer, and Phillips, 2015) and product market power (Kubick, Lynch, Mayberry, and Omer, 2015).

Few scholars have studied the impact on tax avoidance from the perspective of financial constraints. Only in recent years have scholars started to study the relationship between financial constraints and tax avoidance. The current research results show that in countries with more mature market economies, financing-constrained companies usually have higher tax avoidance levels (Dyreng and Markle, 2016; Edwards, Schwab, and Shevlin, 2016; Law and Mills, 2015). Compared with countries with mature market economies, China has objective factors such as different economic systems, social backgrounds, and incomplete corporate governance environments. Is the relationship between financial constraints and tax avoidance also established in the Chinese market environment? This is an open question. Therefore, the first question to be addressed in this article is whether the relationship between financial constraints and tax avoidance holds in the context of China.

As a tax authority, tax authorities have a strong position in tax collection. Tax authorities have the ability to supervise the production and operation of enterprises (Hoopes, Mescall, and Pittman, 2012). Strengthening tax enforcement can curb unreasonable tax avoidance by enterprises and maintain sustained high growth of government tax revenue. The strength of tax enforcement will affect the tax avoidance costs of enterprises. The greater the intensity of tax enforcement in the region where the company is located, the greater the probability that tax avoidance will be found, and the greater the opportunity cost of tax avoidance. Facing the situation that internal and external financing costs are very high at this time, will the financing-constrained companies still carry out aggressive tax avoidance? This is still an open question. Therefore, the second issue to be addressed in this article is whether the relationship between financing constraints and tax avoidance is affected by the intensity of tax enforcement.

Compared with the existing literature, the main contributions of this study are: (1) In China's institutional environment, it provides new empirical evidence for the study of the relationship between financial constraints and tax avoidance, helping us better understand the logic of corporate behavior in developing markets; (2) Few studies have discussed the moderating effect of tax enforcement on the aforementioned relationship, and we have answered this question using Chinese-specific data.

The remainder of this paper proceeds as follows. Section 2 discusses the theoretical analysis and research assumptions. Section 3 describes our research design. Sections 4 present the empirical results and Section 5 concludes the paper.

2. Theoretical analysis and research assumptions

2.2 Financial constraints and Tax avoidance

Due to widespread information asymmetry and other issues in the market, most companies have the phenomenon that external financing costs are higher than internal financing costs. When the company's internal cash flow is not sufficient to meet the investment needs, and it faces a high external financing premium, the company has to give up some valuable projects, which means that the company has fallen into

a certain degree of financial constraints (Cheng, Ioannou, and Serafeim, 2014). At present, researches on easing financial constraints mainly include reducing information asymmetry, optimizing financial environment and increasing liquidity management. Financing-constrained companies can ease financial constraints by easing agency conflicts and improving information asymmetry. The government's optimization of the financial environment can also gradually improve the status of corporate financial constraints from a long-term perspective. However, compared with the above two methods, the more proactive and quicker way to change the status is to increase liquid corporate assets and reduce cash outflows in various ways. Many current studies show that companies facing financial constraints are more inclined to hold more cash. In other words, companies will adopt more active liquidity management to reduce the possible negative effects of financial constraints.

Fazzari, Hubbard, and Petersen (1987) confirmed that due to the difficulty and cost of external financing of financially constrained companies, they tend to use internal cash flow when investing, which can reduce the cost of using corporate funds. In other words, when the company faces financial constraints, due to differences in internal and external financing costs, the company will preferentially seek internal funds to resolve financial constraints.

Corporate income tax is an important cost for a company. Taxes cause internal cash flow to flow out of the company. In reality, the differences between accounting standards and tax laws, professional accounting judgments, information asymmetry, and tax enforcement factors also provide a certain space for companies to avoid tax objectively. The most intuitive economic benefit of corporate tax avoidance is to save tax expenditures and increase cash inflows from operating activities.

Corporate tax avoidance income comes from reducing the current taxable amount or increasing tax credits, reducing current income tax payments and reducing cash expenditures. The main advantages of financing-constrained companies choosing to avoid taxes to increase cash flow are as follows: First, although financing-constrained companies can also choose other ways to reduce cash flow, such as cutting research and development expenditures, advertising expenditures or layoffs, these methods will adversely affect the company's long-term performance and development potential. Financing-constrained companies choose different tax avoidance strategies to reduce corporate tax burdens without causing long-term negative effects on companies (Edwards, Schwab, and Shevlin, 2016). Second, tax avoidance for delayed payment of taxes can be equivalent to a non-interest-bearing loan to the government. The amount and time of delayed payment determine the size of the income. The longer the time, the larger the amount and the higher the interest rate, the higher the tax avoidance income of the enterprise.

Tax avoidance can directly reduce cash outflows, which is of great help to those who have fallen into financial constraints. Therefore, for financing-constrained enterprises, they value the benefits of radical tax avoidance more and have no time to take into account the negative effects of tax avoidance. Therefore, we believe that financing-constrained companies will use tax avoidance as a potential alternative financing method. In order to seize favorable investment opportunities, financing-constrained companies will choose aggressive tax avoidance methods to increase internal cash flow. Therefore, this article makes the following assumptions:

H1： The higher the company's financial constraints, the more aggressive the company's tax avoidance.

2.2 Financial constraints, Tax enforcement and Tax avoidance

Taxation is the right of the state or local self-governing body to compulsory taxation of citizens. The process of taxation is the process of transferring personal resources to public use. Tax enforcement is one of the important external forces for the state to supervise the operation of enterprises. Relevant laws in China clearly stipulate that tax authorities have the right to check the vouchers, financial accounts and related information of taxpaying companies, and to monitor corporate transactions, transfer pricing and other activities.

With the continuous improvement of the tax supervision system, the risk of companies' aggressive tax avoidance being discovered by government tax authorities is increasing. Rego and Wilson (2012) indicate

that if a company's tax behavior raises questions from tax authorities, the tax avoidance cost of the company will increase significantly. Wilson (2009) indicates that if the company's aggressive tax avoidance is discovered by the tax authorities, the penalty interest on the company is about 40% of the estimated tax avoidance income. Hanlon and Slemrod (2009) indicates that when corporate tax avoidance is revealed, investors in the market will reduce the valuation of companies

Based on the above analysis, we can see that strengthening tax enforcement will increase the difficulty and potential cost of tax avoidance, and the marginal benefits of tax avoidance will decrease. Whether the financing-constrained company chooses to avoid tax aggressively depends on the trade-off between tax avoidance income and tax avoidance cost. Studies by most scholars have shown that tax enforcement will increase the cost of tax avoidance, which will reduce the tax avoidance of enterprises. For example, some studies find that in order to reduce tax losses, the government will continuously increase the tax intensity and punishment of enterprises. In areas where tax collection is strict, in order to avoid tax risks, companies will reduce aggressive tax avoidance. For financing-constrained companies, they need to have sufficient funds to invest in valuable projects, but their external financing costs are high, so financing-constrained companies may increase their internal cash flow by avoiding taxes. However, when financing-constrained companies are located in areas with high tax enforcement, they not only face high external financing costs, but also face very high tax avoidance risks, and their potential tax avoidance costs are also high. According to the above analysis, this article believes that in areas with high tax enforcement intensity, enterprises facing financial constraints need to bear large costs and risks, which are greater than the benefits brought by their tax planning. Therefore, in high-intensity tax enforcement areas, financial constraints will not enhance corporate tax avoidance motivation. In areas with low tax enforcement, enterprises have lower tax avoidance costs. In order to capture valuable investment opportunities, financing-constrained companies will choose to accumulate internal cash flows through tax avoidance. Therefore, this article makes the following assumptions:

H2：Compared with regions with a high level of tax enforcement, the impact of financial constraints on corporate tax avoidance is more significant in regions with a low level of tax enforcement.

3. Research Design

3.1 Sample Selection and Data Source

The sample of this article contains China's A-share listed companies from 2012 to 2017. The nominal tax rate of corporate income tax in this article comes from Wind Database. The calculation data of tax enforcement are all manually collected from the China Statistical Yearbook and the National Bureau of Statistics. The rest of the data is obtained from the China Stock Market and Accounting Research (CSMAR) Database. In addition, in order to ensure the accuracy of the research results, this article excludes companies with missing data, ST (special treatment) and listed companies in the financial industry. After performing the above processing on the initial sample, the final sample size of this article is 9,752 observations, involving 2216 companies. All data processing was performed in EXCEL2013 and Stata14.0 statistical analysis software. In addition, in order to reduce the effect of outliers on the data results, winsorize is performed on continuous variables at the 1% -99% percentile.

3.2 Main Variables

3.2.1 Dependent variable

The dependent variable TA in this article is the degree of corporate tax avoidance. This article uses the deformation of the company's actual income tax rate (the five-year average of the "difference between the nominal income tax rate and the actual tax rate") to measure the degree of tax avoidance. This is because many listed companies in China enjoy different preferential tax policies, and the existence of corporate tax refunds and tax disputes usually lasts a long time. Therefore, the actual tax rate of the company in the current year can not properly reflect the degree of tax avoidance of the company. Dyreng, Hanlon, and Maydew (2008) propose to use the average of multiple periods of actual tax rates to measure corporate tax

avoidance, which has also become one of the main methods for scholars to measure tax avoidance. Therefore, this article uses the data from 2008 to 2017 to calculate the five-year average of the "difference between the nominal income tax rate and the actual tax rate" from 2012 to 2017, and use it to describe the extent of tax avoidance. The higher the value of this indicator, the higher the tax avoidance of the enterprise.

3.2.2 Independent variable

The main independent variable of this paper is financial constraints. This paper draws on two methods commonly used in the literature to measure the degree of financial constraints: SA index and KZ index (Dyreng and Markle, 2016; Edwards, Schwab, and Shevlin, 2016).

First, this article uses the SA index designed by Hadlock and Pierce (2010) to measure financing constraints. The specific calculation formula is as follows:

$SA=-0.737*SIZE+0.043SIZE^2-0.040*AGE$ （3.1）

In formula (3.1), SIZE represents the size of the company and AGE represents the listing time. The larger the SA index, the higher the degree of financing constraints.

Secondly, this paper uses the KZ index (combined regression of five financial indicators) proposed by Kaplan and Zingales (1997) to measure financial constraints. Based on the financial data of Chinese A-share listed companies, this article constructs the KZ index through a series of steps, and finally formulates the KZ calculation formula:

KZ=-0.1359*CF-1.3201*CashHolding-0.0255*Div+2.850*Lev+0.1586* TobinQ （3.2）

In formula (3.2) CF represents the ratio of the company's operating cash flow to total assets. CashHolding is the ratio of the company's cash balance to total assets. Div refers to the ratio of corporate cash dividends to total assets. Lev and TobinQ represent the asset-liability ratio and the ratio of corporate market value to total book assets, respectively. The larger the KZ index, the higher the degree of financing constraints.

3.2.3 Control variable

This model includes the following control variables: company size (SIZE), debt ratio (LEV), company growth (GROW), property right (SOE) company capital intensity (PPE), inventory intensity (INVENT), investment income variables (EQINC), whether the profit is negative (LOSS), the nominal tax rate (RATE), whether the chairman is also the CEO (POWER). The specific definition is shown in Table 1.

3.2.4 Moderating variables

Our moderating variable is the intensity of tax enforcement. Tax enforcement (TE) is measured indirectly through taxation effort indicators in finance. We use the following model:

$$\frac{T_{i,t}}{GDP_{i,t}} = \beta_0 + \beta_1 \frac{IND1_{i,t}}{GDP_{i,t}} + \beta_2 \frac{IND2_{i,t}}{GDP_{i,t}} + \beta_3 \frac{OPENNESS_{i,t}}{GDP_{i,t}} + \in_{i,t} \quad (3.2)$$

In formula (3.2), $T_{i,t}$ represents the tax revenue of area i in the t-year, and $GDP_{i,t}$ represents the GDP of area i in the t-year. $OPENNESS_{i,t}$ represents the degree of regional openness and is equal to the total import and export of the business unit's location at the end of the t year in area i. $IND1_{i,t}$ and $IND2_{i,t}$ are the ratio of the primary industry to the GDP and the ratio of the secondary industry to the GDP in the t year of area i, respectively. We bring the data of each province into the model for regression to get the estimated correlation coefficient, then calculate the predicted value of $T_{i,t}$ / $GDP_{i,t}$, and then use $T_{i,t}$ / $GDP_{i,t}$_est to express it.

The tax enforcement (TE) is the ratio of the actual tax revenue to the predicted tax revenue of each region. The greater the value of TE, the greater the tax collection intensity. The specific calculation formula is as follows:

$$TE_{i,t} = (T_{i,t} / GDP_{i,t}) / (T_{i,t} / GDP_{i,t}\_est) \quad (3.3)$$

When testing Hypothesis 2, we divided the samples into two groups for regression based on the median value of TE. It should also be noted that in the sample selection process, since five cities are taxed independently (Dalian, Shenzhen, Ningbo, Xiamen, and Qingdao), the economic data of urban areas are not

independently counted. Considering the comparability of data, we sum up the taxation of these five cities separately with the taxation data of their provinces. In addition, because the Tibet Autonomous Region does not levy a local corporate income tax, this is different from other provinces. In order to keep the data caliber consistent, this article excludes the sample data of the Tibet Autonomous Region.

Table 1 lists the symbols and definitions of all variables involved in the model.

Table 1: Variable definitions

Variable Name	Symbol	Definition
Dependent Variable		
Tax avoidance	*TA*	The five-year average of "difference between nominal income tax rate and actual tax rate"
Independent Variables		
Financial constraints	*SA*	SA index, calculated as described above
Financial constraints	*KZ*	KZ index, calculated as described above
Control Variables		
Firm size	*SIZE*	The natural logarithm of the total assets
Firm profitability	*ROA*	The ratio of return on total assets
Firm Liabilities	*LEV*	The ratio of total liabilities to total assets
Company growth	*GROW*	The growth rate of the main operating income
Capital intensity	*PPE*	The ratio of fixed assets to total assets at the end of the period
Ownership	*SOE*	1 if the company is state-owned, 0 otherwise
Business conditions	*LOSS*	1 if the net profit in the previous year is less than 0, 0 otherwise
Investment income	*EQINC*	The ratio of investment income to total assets at the end of the year
Inventory intensity	*INVENT*	The ratio of net inventory to total assets at the end of the period
Nominal tax rate	*RATE*	Corporate Nominal Tax Rate
CEO Power	*POWER*	1 if the CEO and the chairman are the same people, 0 otherwise
Moderating variables		
Tax Enforcement	*TE*	The ratio of local actual tax revenue to expected tax, calculated as described above

3.3 Regression Model

This paper constructs the following model (3.4), and at the same time, the standard error is adjusted for heteroskedasticity and the cluster is adjusted at the company level.

$$TA_{i,t} = \beta_0 + \beta_1 SA(KZ) + Control\ variable + \varepsilon \qquad (3.4)$$

The above model (3.4) will be used to test the two hypotheses in this paper: (1) Using the full sample to test H1, study the impact of the degree of financial constraints on corporate tax avoidance behavior. (2) This article divides the sample into two groups: high tax enforcement intensity and low tax enforcement intensity. It examines the relationship between the degree of financial constraints and tax avoidance under different tax enforcement intensity.

4. Empirical Results

4.1 Descriptive Statistics of Variables

Table 2 below shows the descriptive statistics of the main variables in this article. Among them, the mean value of independent variable financing constraints SA and KZ index is greater than zero, indicating that listed companies generally have financing constraints. The median and average values of the dependent variable tax avoidance indicator (TA) are positive, indicating that the actual income tax of most listed companies is lower than the nominal income tax, which indicates that tax avoidance behavior of listed companies in China may be a common phenomenon.

From the perspective of controlling variables, the average value of the property right (SOE) is 0.579,

indicating that 57.9% of the sample interval in this article is state-owned enterprises. The standard deviation of the SIZE indicator is large, indicating that the sample includes large, medium, and small enterprises of different sizes. The growth rate of the main business income represents the growth capacity of the company. This indicator is usually between 20% and 25%. The average value of the sample in this article is 22.9%, which indicates that the growth capacity of the sample in this article is normal. In terms of asset composition of the sample companies, the proportion of capital intensity (PPE) and inventory (INVENT) accounted for 24.6% and 25.0%. The investment income level (EQINC) of the sample companies is low, with an average value of 0.012. In addition, the proportion of companies that lost money in the previous period accounted for 11.4%. The average tax enforcement (TE) in the sample is 0.208, indicating that the current intensity of tax enforcement in China is weak.

Table 2: Descriptive statistical of variables in model

Variables	Mean	Median	Std. Dev.	Min	Max	N
TA	0.031	0.016	0.144	-0.599	0.618	9752
SA	4.098	3.916	1.492	0.876	8.935	9752
KZ	1.585	1.651	1.083	-2.788	5.174	9752
PPE	0.246	0.211	0.181	0.002	0.751	9752
SIZE	21.930	21.820	1.275	18.820	25.610	9752
ROA	0.036	0.030	0.061	-0.190	0.240	9752
SOE	0.579	1.000	0.494	0.000	1.000	9752
INVENT	0.250	0.149	0.343	0.000	2.182	9752
EQINC	0.012	0.002	0.026	-0.012	0.158	9752
GROW	0.229	0.097	0.622	-0.323	4.905	9752
LEV	0.480	0.481	0.217	0.050	1.019	9752
LOSS	0.114	0.000	0.318	0.000	1.000	9752
POWER	0.118	0.000	0.323	0.000	1.000	9752
RATE	0.201	0.250	0.051	0.100	0.250	9752
TE	0.208	0.000	0.406	0.000	1.000	9752

4.2 Benchmark Regression Analysis

Table 3 shows the empirical results of the degree of financial constraints and tax avoidance. The regression results show that the coefficient of SA is 0.0403, and it is significant at the 1% level; meanwhile, the coefficient of KZ is 0.0037, and is significant at the 5% level. This means that the degree of financial constraints is significantly positively related to the degree of tax avoidance. Hypothesis 1 of this article has been verified, that is, the higher the degree of financial constraints, the more aggressive the company's tax avoidance.

In terms of controlling variables: the growth of the company (GROW) is significantly positively related to the degree of tax avoidance of the company, indicating that high-growth companies do have a large number of investments and enjoy preferential tax projects, and they can use investment projects for more tax avoidance activities. There is also a significant positive correlation between capital intensity (PPE) and the degree of corporate tax avoidance, indicating that the higher the company's capital intensity, the higher the corporate tax avoidance, which is consistent with the results of Dyreng, Hanlon, and Maydew (2008). The enterprise investment income (EQINC) is significantly positively related to tax avoidance; the loss of the company in the previous year (LOSS) and corporate tax avoidance are significantly positively related. The relationship between the above control variables and tax avoidance is basically in line with expectations.

Table 3: Benchmark Regression Analysis

Variables	（1）	（2）

SA	0.0403***	
	（6.10）	
KZ		0.0037**
		（2.27）
PPE	0.0424***	0.0471***
	（4.18）	（4.31）
LEV	0.0232***	0.0078
	（2.93）	（0.81）
GROW	0.0125***	0.0117***
	（5.42）	（4.55）
SIZE	-0.0558***	-0.0074***
	（-7.12）	（-5.39）
ROA	0.0595*	0.0444
	（1.89）	（1.31）
INVENT	-0.0487***	-0.0466***
	（-9.06）	（-8.31）
EQINC	0.6020***	0.6022***
	（10.85）	（10.02）
LOSS	0.0493***	0.0431***
	（8.92）	（7.39）
SOE	-0.0008	-0.0060*
	（-0.24）	（-1.81）
POWER	0.0087**	0.0111**
	（1.97）	（2.35）
RATE	0.5824***	0.5526***
	（17.59）	（15.91）
Constant	1.0246***	0.1932***
	（7.16）	（5.09）
Industry	Yes	Yes
Year	Yes	Yes
N	9752	9752
Adj.R²	0.103	0.0974
F	31.2494	25.9083

4.3 Regression Results of Moderating Effect

This article first sorts the tax collection intensity (TE) from large to small in each year and region, and then divide the tax enforcement intensity into two groups: high tax enforcement intensity and low tax enforcement intensity. Then regress on financial constraints and tax avoidance separately.

The results are shown in Table 4 below. This article uses two indicators, the SA index and the KZ index, to measure financial constraints. In areas where tax enforcement is strong, the regression results show that the degree of financial constraints is not related to tax avoidance. In areas with low tax enforcement intensity, the coefficient of SA is 0.0459, which is significant at the 1% level, and the coefficient of KZ is 0.0040, which is significant at the 5% level. This shows that under the control of other factors, compared with regions with high tax enforcement intensity, the impact of financial constraints on corporate tax avoidance is more significant in regions with low tax enforcement intensity, which validates the hypothesis 2 of this paper.

Table 4: Regression Results of Moderating Effect

Variables	（1）		（2）	
	High tax enforcement intensity	Low tax enforcement intensity	High tax enforcement intensity	Low tax enforcement intensity
SA	0.0201	0.0459***		
	（1.40）	（6.04）		
KZ			0.0025	0.0040**
			（0.83）	（2.11）
PPE	0.0390*	0.0427***	0.0331	0.0494***
	（1.73）	（3.74）	（1.35）	（4.04）
LEV	0.0065	0.0139***	0.0043	0.0134***
	（1.35）	（5.27）	（0.83）	（4.54）
GROW	0.0175	0.0247***	0.005	0.0087
	（0.97）	（2.79）	（0.23）	（0.80）
SIZE	-0.0344**	-0.0618***	-0.0110***	-0.0065***
	（-2.16）	（-6.87）	（-3.67）	（-4.21）
ROA	0.0477	0.0699**	-0.0073	0.058
	（0.66）	（1.98）	（-0.09）	（1.53）
INVENT	-0.0604***	-0.0447***	-0.0591***	-0.0422***
	（-5.91）	（-7.06）	（-5.64）	（-6.37）
EQINC	0.6324***	0.5818***	0.6059***	0.5924***
	（5.46）	（9.19）	（4.91）	（8.60）
LOSS	0.0280**	0.0555***	0.0210*	0.0485***
	（2.41）	（8.83）	（1.69）	（7.35）
SOE	-0.0056	0.0001	-0.0061	-0.0065*
	（-0.83）	（0.02）	（-0.90）	（-1.72）
POWER	0.0023	0.0109**	0.0043	0.0131**
	（0.26）	（2.13）	（0.47）	（2.40）
RATE	0.6673***	0.5572***	0.6576***	0.5259***
	（9.61）	（14.76）	（9.01）	（13.29）
Constant	0.7357**	1.1188***	0.3098***	0.1076***
	（2.52）	（6.81）	（4.24）	（2.94）
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	2028	7724	2028	7724
Adjust-R^2	0.1314	0.0981	0.1308	0.0919
F	9.2852	23.6925	8.1265	19.5597

5. Conclusions and Implications

This article uses the data of China's A-share listed companies from 2012 to 2017 as a research sample to conduct an empirical test on the relationship between financial constraints, tax enforcement and tax avoidance. We find that, with other factors unchanged, the degree of financial constraints is significantly positively related to the degree of corporate tax avoidance. The above relationship is even more obvious in the case of weak tax enforcement. This article helps us to understand better the relationship between corporate financial constraints and tax avoidance in developing markets, and has certain reference significance for corporate development and taxation authorities.

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