

Strategic Radicalization and Corporate Tax Avoidance

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Abstract. This paper examines the effect of strategic radicalization on corporate tax avoidance by taking A-share listed companies in China from 2007 to 2020 as the research object. It is found that the degree of strategic radicalization has a significant positive effect on corporate tax avoidance, and the higher the degree of strategic radicalization, the greater the degree of corporate tax avoidance, and the finding still stands after the robustness test. Further study finds that the higher the equity concentration and lower the quality of internal control, the stronger the effect of strategic radicalization on corporate tax avoidance. The research in this paper enriches the literature on the economic consequences of corporate strategic radicalization and, at the same time, complements the factors influencing corporate tax avoidance, which are of great reference value to corporate management, stakeholders and tax regulators.

Keywords: Strategic tax avoidance, corporate tax, listed companies.

1. Introduction

Tax avoidance essentially reflects the enterprises' demand for reducing expenses and maximizing profits. Along with the popularity of tax avoidance activities in the international arena, tax avoidance has gradually changed from an occasional and spontaneous business behavior to a regular, conscious and specialized economic activity. The act of increasing corporate income by keeping more economic resources that should be collected by the state in the enterprise through various tax avoidance methods seems to be a real choice of companies in all countries, and ultimately affects social welfare (Weisbach, 2001). Although this phenomenon has improved in recent years under the continuous attention of relevant regulators and the public, there is still no shortage of concerns about corporate taxation (Wang, 2019). Therefore, it is of practical significance to explore the factors influencing corporate tax avoidance.

Corporate tax avoidance has also attracted extensive attention from academics, and many scholars have conducted in-depth studies on the influencing factors of corporate tax avoidance from different perspectives. The studies that have been conducted on the factors influencing corporate tax avoidance mainly focus on the intensity of tax collection (Mihir et al., 2007; Cai et al., 2015), the level of regulation (Kubick et al., 2016), corporate social responsibility (Hoi et al., 2013; Wang et al., 2016), financing constraints (Chen et al., 2018), fiscal pressure (Sun et al., 2020), and institutional cross-holding (Xing et al., 2021), and so on. However, most of these studies focus on a specific factor affecting corporate tax avoidance at the macro level or at the firm level, while ignoring the potential impact of corporate strategic heterogeneity. It has been shown that a firm's strategic choice can directly affect the firm's financial decision making behavior (Wang et al., 2017). Miles et al. (1978) classified corporate strategies into offensive, analytical, and defensive strategies. Offensive strategy is the most radical, analytical strategy is moderate, and defensive strategy is less radical. Strategy choice has a fundamental role in corporate financial decisions, and the impact of corporate strategy on accounting and corporate finance has attracted the attention of scholars. For example, studies have found that corporate strategy can influence audit fees (Bentley et al., 2013), share price crash risk (Habib & Hasan, 2017), surplus management (Sun et al., 2016), financing constraints (Hu 2021), and executive compensation (Wang et al., 2021). However, few scholars have explored the impact of corporate strategy on corporate tax avoidance behavior. Based on this, the research question of this paper is about the impact of strategic radicalization on corporate tax avoidance.

This paper empirically examines the effect of strategic radicalization on corporate tax avoidance using A-share listed companies from 2007 to 2020 as a sample. The findings show that strategic radicalization has a significant effect on corporate tax avoidance, and the higher the degree of strategic

radicalization, the greater the degree of corporate tax avoidance, and the finding still stands after robustness tests. Further findings show that the higher the equity concentration and lower the quality of internal control, the stronger the effect of strategic radicalization on corporate tax avoidance.

The contributions of this paper are mainly reflected in the following aspects: First, this paper enriches the research related to the economic consequences of strategic radicalization and broadens the application of corporate strategy in corporate finance and accounting. The economic consequences of strategic radicalization have actually been studied by some scholars. It has been shown that strategic radicalization has significant effects on stock price collapse risk (Habib & Hasan, 2017), debt maturity structure (Zhai et al., 2019), and firm innovation (Yuan et al., 2020), but less literature has directly studied the effect of strategic radicalization on the degree of corporate tax avoidance. This paper focuses on the relationship between strategic radicalization and corporate tax avoidance, which provides a useful complement to the relevant literature. Second, this paper enriches the research related to the factors influencing corporate tax avoidance. Previous scholars have mostly focused on a specific factor at the macro level and firm level on the factors influencing corporate tax avoidance, e.g., tax collection intensity (Mihir et al., 2007), fiscal pressure (Sun et al., 2020), corporate social responsibility (Hoi et al., 2013; Wang et al., 2016), etc. Miles et al. (1978) identified firm-level characteristics as corporate response indicators of business strategy. Therefore, studying the impact of strategic radicalization on corporate tax avoidance can deepen the understanding of the underlying strategic-level causes of corporate tax avoidance.

The rest of the paper is organized as follows: Part II provides the theoretical analysis and presents the research hypotheses; Part III discusses the research design, including sample selection and data sources, variable definition, and model construction; Part IV conducts the empirical analysis, including descriptive statistics, correlation analysis, and regression analysis; Part V conducts robustness testing; Part VI conducts further analysis; and Part VII draws conclusions.

2. Theoretical Analysis and Research Hypotheses

2.1 Literature Review

Chandler (1962) first described corporate strategy as "the identification of the basic long-term goals of the firm, and the course of action and the manner of resource allocation to achieve them." In the subsequent studies, different scholars have described and classified the types of strategies. Miles et al. (1978) classified corporate strategies into offensive, analytical and defensive strategies. Porter (1980) classified corporate strategies into two categories: cost leadership strategies and differentiation strategies. Bentley et al. (2013) based on this, used financial data to measure corporate strategies from six aspects metrics and concluded that the more radical the company's strategy, the more serious the financial irregularities and higher the audit costs. Following this, scholars have used financial data to draw a series of research conclusions: the higher the strategic radicalization, the lower the accounting robustness (Liu, 2016), the lower the quality of internal control over financial reporting (Bentley, 2017), and the higher the risk of stock price collapse (Sun et al., 2016), etc.

Regarding the influencing factors of corporate tax avoidance, current scholars mainly study from the corporate macro environment and the firm level. In terms of macro environment, Dubin et al. (1990) found that corporate tax avoidance will become more and more serious as tax enforcement decreases; Fan et al. (2013) found that ineffective enforcement of corporate income tax by local tax bureaus will lead to widespread corporate tax avoidance; Zhang et al. (2021) showed that the implementation of local government industrial policies will weaken the tax avoidance motivation of affected enterprises in the jurisdiction, and in turn, reduce the degree of corporate tax avoidance. At the firm level, Desai et al. (2007) found that an increase in tax rate when corporate governance is poor leads to an increase in managers' profit-grabbing behavior, which increases the degree of corporate tax avoidance; Chen et al. (2015) found that high-quality internal control helps firms achieve their compliance goals and can effectively inhibit radical corporate tax avoidance behavior and protect investors' interests; Xing et al. (2021) found that institutional cross-shareholding can significantly

reduce the degree of corporate tax avoidance by enhancing corporate governance and alleviating financing constraints.

Through a review of the existing literature, we find that, with respect to the influencing factors of corporate tax avoidance, current scholarly research has mainly focused on the macro level and corporate governance level, while ignoring the potential impact of the driving force behind, i.e., strategic heterogeneity. Therefore, this paper explores the impact of strategic radicalization on corporate tax avoidance in order to deepen the understanding of corporate tax avoidance at a deeper level.

2.2 Research Hypothesis

First, companies with an offensive strategy have a greater incentive to avoid taxes. The type of strategy affects the compensation structure of managers, which in turn affects the degree of corporate tax avoidance. A firm's choice of different strategies reflects its acceptance of risk, and firms with more radical strategies tend to be more accepting of risk. The compensation structure of managers tends to differ significantly across strategic firms. Compared to defensive firms, offensive firms focus on developing new products and markets with greater output uncertainty (Miles, 1978). Since offensive firms face greater uncertainty, offensive firms are more likely to encourage risk-taking behavior among managers through compensation contracts, and thus managers' compensation in offensive firms is more likely to be based on stock options rather than fixed compensation (Nandini et al., 1997). A study by Simons (1987) based on survey data found that bonuses for managers in offensive firms can account for 50% of total compensation, while defensive managers' bonuses account for only 25% or less of total compensation. Stock option compensation enables managers to share the profits from successful investments and not have to bear the losses from investment failures, which can effectively reduce managers' risk aversion and motivate them to take risks (Ye et al., 2015). Therefore, choosing a more radical strategy means that firms need to take higher risks, and the courage and ability of firms to choose a more radical strategy indicates a higher level of acceptance of uncertainty, a higher level of risk willing to take, and thus a higher level of tax avoidance.

While tax avoidance activities bring high profitability, they also bring high risks for enterprises. Therefore, a firm's decision to avoid taxes requires a combination of the benefits and costs associated with tax avoidance, as well as the firm's risk acceptance. Tax avoidance can help firms to keep more cash within the firm, thus increasing the level of free cash flow within the firm (Frischmann et al., 2008), reflecting the firm's pursuit of reducing expenses and maximizing profits. However, tax avoidance also poses high risks for firms. Tax avoidance increases the likelihood that a firm will be audited and penalized, as well as directly leading to reputation damage and career risk for managers (Armstrong et al., 2015). Liu (2018) found that corporate tax avoidance triggers significant non-tax costs that exceed even the tax benefits themselves. Kim (2011) found that the information asymmetry and managerial self-interest caused by tax avoidance leads to a large amount of bad news hidden within the firm, making the probability of future stock price collapse significantly higher. In addition to this, tax avoidance also significantly increases firms' Type I agency costs (i.e., the cost of managers' self-interested behavior) (Ye et al., 2014), reduces firms' investment efficiency (Liu et al., 2013), and increases firms' audit costs (Michael et al., 2013). Compared to offensive firms, defensive firms pay particular attention to protecting their reputation and avoiding threats to the organization's survival. Firms with more radical strategies are more accepting of uncertainty and have more positive attitudes toward risk, which can influence their judgments about the cost of tax avoidance. Therefore, the more radical the strategy, the more optimistic the judgment of tax avoidance costs, the more willing to take risks and accept potential risk costs, and the higher the degree of corporate tax avoidance.

Second, offensive companies have more opportunities for tax avoidance. There are various means of corporate tax avoidance, and firms may engage in tax avoidance by transferring assets, related transactions, and mergers and acquisitions (Zeng et al., 2009). Offensive firms have greater uncertainty in their output than defensive firms (Miles, 1978). The business model of conventional strategic enterprises is more fixed, and regulators can judge the behavior of enterprises based on

industry standards, which is less difficult to regulate, while when the uncertainty of enterprise operation is greater, it will increase the difficulty of external regulation, thus providing room for tax avoidance (Yuan et al., 2019). Some studies have shown that the more radical a firm's strategy is, the more volatile its performance is (Tang et al., 2011). It will be more difficult for regulators to analyze radical firms based on industry standards, and regulatory efficiency will be reduced, thus providing opportunities for tax avoidance. Therefore, the more radical the strategy, the more likely it is that firms will generate tax avoidance activities.

Based on the above analysis, this paper concludes that there is a significant difference in the degree of tax avoidance when there is a difference in the degree of corporate strategic radicalization. Accordingly, this paper proposes the following hypothesis:

The more radical the corporate strategy, the greater the degree of corporate tax avoidance.

3. Study Design

3.1 Sample Selection and Data Sources

This paper selects a sample of A-share listed companies from 2007 to 2020 for the empirical study, and screens the samples according to the following criteria: (1) exclude the samples of companies in the financial and insurance industry, which have special accounting statements compared with other industries; (2) exclude the ST samples; (3) exclude the samples with missing variables, and the final total number of observations is 12,848. The data required in this paper was obtained from the China Stock Market & Accounting Research Database (CSMAR) and the WIND database. In order to eliminate the effect of extreme values, all continuous type variables are shrunken at the 1% and 99% levels (Winsorize) in this paper.

3.2 Variable Definition

1) Dependent Variable: corporate tax avoidance (LRATE_diff). Unlike foreign tax policies, Chinese listed companies enjoy a wide range of tax incentives, such that the nominal tax rate varies from company to company (Wu, 2009). In addition, it is not appropriate to measure corporate tax avoidance using only the effective tax rate in the current period because of the existence of tax rebates and tax disputes between firms and tax collection authorities that may last for several years (Dyreg et al., 2008). Therefore, this paper uses the five-year average of the difference between the nominal income tax rate and the effective tax rate (LRATE_diff) to measure the extent of corporate tax avoidance by referring to the study of Ye (2014), and the larger the LRATE_diff, the more radical the corporate tax avoidance.

2). Explanatory Variables: strategic radicalization (Strategy). In this paper, by referring to Bentley (2013) and Yuan (2020), we construct indicators of strategic radicalization of firms in six aspects: (1) the share of Research & Development expenditure in operating revenue (RDS); (2) the ratio of the number of employees to operating revenue (EMPLV); (3) the growth rate of operating revenue (GROWS); (4) the share of sales revenue in operating revenue (SEINS); (5) the degree of employee fluctuation of the company (EMPLV); and (6) the proportion of fixed assets to total assets (PPES). In this paper, we use the moving average of the past five years to measure the above variables, and divide the sample into five groups according to "industry-year" from the smallest to the largest, with the first five variables being the smallest group, the second smallest group, the middle group, the second largest group, and the largest group, with values of 1, 2, 3, 4, and 5, and the sixth variable being assigned the values of 5, 4, 3, 2, 1. The group scores of the six variables were summed to obtain the final measure variable "Strategy" with values ranging from 6 to 30, with higher scores indicating greater radicalization and a greater tendency toward offensive strategies.

3). Control Variables. With reference to previous literature (Wei, 2020; Xing 2021; Tan 2015; Song 2019), the following variables were selected as control variables: Firm Size (Size), Return on Assets (ROA), Solvency (Lev), Firm Age (Age), Growth (Growth), Cash Flow (Cash), Institutional Shareholding Ratio (Institution), Equity Concentration (First), Board of Director's Size (Boardsize),

and Proportion of Independent Director (Indr). In addition, we also control the dummy variables of year and industry. The definitions and explanations of the variables are shown in Table 1.

Table 1. Definitions of Variables

	Name	Symbol	Definition
Dependent Variable	Corporate Tax Avoidance	<i>LRATE_diff</i>	Referring to the study by Ye (2014) and others, the five-year average of the difference between the nominal income tax rate and the effective tax rate is used as a measure, as described in the previous section.
Explanatory Variable	Strategic Radicalization	<i>Strategy</i>	Referring to Bentley (2013) and other studies, discrete variables were constructed, as described in detail in the previous section
Control Variable	Firm Size	<i>Size</i>	Natural logarithm of total assets
	Return on Assets	<i>ROA</i>	Net profit/total assets
	Solvency	<i>Lev</i>	Total liabilities / total assets
	Firm Age	<i>Age</i>	Number of years a company has been listed
	Growth	<i>Growth</i>	(Current period operating revenue - Prior period operating revenue)/Prior period operating revenue
	Cash Flow	<i>Cash</i>	Net cash flow from operating activities/total assets
	Institutional Shareholding Ratio	<i>Institution</i>	Institutional investors' shareholding ratio
	Equity Concentration	<i>First</i>	Percentage of shareholding of the largest shareholder
	Board of Director's Size	<i>Boardsize</i>	Number of Board of Directors
Proportion of Independent Director	<i>Indr</i>	Number of independent directors on the board of directors / Total number of directors on the board	

3.3 Model Construction

To test the research hypothesis of this paper, a multiple regression model was developed as follows:

$$LRATE_diff = \beta_0 + \beta_1 Strategy + \gamma Control + Industry + Year + \varepsilon \quad (1)$$

where, LRATE_diff is the degree of corporate tax avoidance, Strategy indicates the degree of corporate strategic radicalization, and higher values indicate a higher degree of strategic radicalization and a preference for competitive strategies. Control is the control variable in this paper. In addition, this paper also controls the fixed effects for industry and year.

4. Empirical Analysis

4.1 Descriptive Statistics

Table 2. Descriptive Statistics of Main Variables

Variable	Sample	Mean Value	Standard Deviation	Minimum	Median	Maximum
<i>LRATE_diff</i>	12848	0.0233	0.0758	-0.2249	0.0251	0.2148
<i>Strategy</i>	12848	17.8753	3.7362	9.0000	18.0000	26.0000
<i>Size</i>	12848	22.6069	1.2597	20.2559	22.4256	26.5158
<i>ROA</i>	12848	0.0504	0.0394	0.0017	0.0406	0.1978
<i>Lev</i>	12848	0.4542	0.1929	0.0694	0.4539	0.8489
<i>Age</i>	12848	12.9910	5.8865	4.0000	12.0000	26.0000
<i>Growth</i>	12848	0.1635	0.3335	-0.4606	0.1079	2.0106
<i>Cash</i>	12848	0.1766	0.1144	0.0212	0.1473	0.5774
<i>Institution</i>	12848	7.8865	8.0540	0.0000	5.3956	37.0107
<i>First</i>	12848	35.0681	14.8137	8.8600	33.3000	73.9700
<i>Boardsize</i>	12848	8.8621	1.7639	5.0000	9.0000	15.0000
<i>Indr</i>	12848	0.3719	0.0540	0.3077	0.3333	0.5714

Table 2 reports the descriptive statistics of the main variables of the sample. The median of the five-year average of the difference between nominal and effective income tax rates (LRATE_diff) is positive, indicating that the effective income tax rate is lower than the nominal income tax rate for most listed companies. This suggests that corporate tax avoidance may be a common phenomenon. The standard deviation of strategic radicalization (STRATEGY) is 3.7362, which indicates that there are some differences in the types of strategies of the sample companies.

4.2 Correlation Analysis

Table 3 reports the results of the Pearson correlation analysis between the variables. As can be seen from Table 3, the correlation coefficient between strategic radicalization (Strategy) and corporate tax avoidance (LRATE_diff) is 0.113, which is significant at the 1% level, tentatively indicating that the higher the strategic radicalization of the firm, the higher the degree of corporate tax avoidance.

Table 3. Correlation Coefficients of the Main Variables

	LRATE_diff	Strategy	Size	ROA	Lev	Age	Growth	Cash	Institution	First	Boardsize	Indr
LRATE_diff	1.000											
Strategy	0.113***	1.000										
Size	-0.074***	-0.046***	1.000									
ROA	0.238***	0.165***	-0.097***	1.000								
Lev	-0.192***	-0.117***	0.499***	-0.415***	1.000							
Age	-0.144***	-0.128***	0.311***	-0.097***	0.227***	1.000						
Growth	0.038***	0.207***	0.061***	0.120***	0.092***	-0.077***	1.000					
Cash	0.045***	0.071***	-0.163***	0.266***	-0.287***	-0.019**	-0.034***	1.000				
Institution	0.127***	0.188***	0.141***	0.272***	0.030***	-0.046***	0.102***	0.073***	1.000			
First	-0.00100	-0.104***	0.237***	0.045***	0.130***	0.054***	-0.0120	-0.00500	-0.121***	1.000		
Boardsize	0.036***	-0.0140	0.201***	-0.00300	0.110***	0.071***	-0.00600	-0.026***	0.046***	0.050***	1.000	
Indr	-0.030***	0.00800	0.084***	-0.036***	0.028***	-0.0100	-0.00100	-0.00400	-0.00600	0.055***	-0.420***	1.000

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

4.3 Regression Analysis

Table 4. Multiple Regression Results

Variable	LRATE_diff	LRATE_diff	LRATE_diff
	(1)	(2)	(3)
Strategy	0.0023*** (12.9763)	0.0010*** (5.6597)	0.0004** (1.9705)
Size		0.0001 (0.1242)	0.0076*** (11.0510)
ROA		0.3043*** (15.2328)	0.2992*** (15.8242)
Lev		-0.0480*** (-10.3220)	-0.0667*** (-13.1162)
Age		-0.0012*** (-10.4851)	-0.0002 (-1.4784)
Growth		0.0009 (0.4153)	0.0017 (0.7837)
Cash		-0.0271*** (-4.6036)	-0.0340*** (-6.0183)
Institution		0.0007*** (8.1244)	0.0003*** (4.0740)
First		0.0001*** (2.7626)	0.0001 (1.2452)
Boardsize		0.0021*** (4.9127)	-0.0002 (-0.4864)
Indr		-0.0040 (-0.2956)	-0.0128 (-1.0062)
Constant	-0.0176*** (-5.4616)	0.0027 (0.1814)	0.0372** (2.2851)
Industry	No	No	Yes
Year	No	No	Yes
N	12,848	12,848	12,848
Adjusted R2	0.0126	0.0897	0.2337

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

Table 4 reports the results of the multiple regressions. In particular, the coefficient of strategic radicalization (Strategy) in regression (1) is 0.0023 and significant at the 1% level without the inclusion of control variables; in regression (2), the coefficient of strategic radicalization (Strategy) is 0.0010 and significant at the 1% level after the inclusion of control variables; in regression (3), after further controlling for year and industry effects, the coefficient of strategic radicalization (Strategy) is 0.0004 and is significant at the 5% level. The positive relationship between strategic radicalization and corporate tax avoidance indicates that the more radical the corporate strategy, the greater the degree of corporate tax avoidance, which supports the hypothesis of this paper.

5. Robustness Tests

We find that strategic radicalization positively affects corporate tax avoidance. However, this finding may be affected by endogeneity issues. For instance, corporate tax avoidance may in turn have an impact on strategic radicalization; strategic radicalization and tax avoidance may be influenced by both firm management characteristics, etc. To address the endogeneity issue, we further test the relationship between strategic radicalization and corporate tax avoidance using individual fixed effects regressions and instrumental variables method.

5.1 Individual Fixed Effects Regression

To avoid the effect of individual differences across listed companies, we used individual fixed effects regressions for testing (Yuan et al., 2019), as shown in Table 5. Among them, column (1) presents the results of the regressions that do not include control variables and do not control for year effects, column (2) presents the results of the regressions that include control variables but do not control for year effects, and column (3) presents the results of the regressions that include control variables and also control the year effects. The results show that the coefficient on strategic radicalization is significantly positive in all three columns, consistent with the results in Table 4, indicating that our findings are not affected by the use of the model.

Table 5. Individual Fixed Effects Regressions

Variable	<i>LRATE diff</i>	<i>LRATE diff</i>	<i>LRATE diff</i>
	(1)	(2)	(3)
<i>Strategy</i>	0.0041*** (5.7461)	0.0011* (1.7332)	0.0013** (1.9830)
<i>Size</i>		0.0087*** (2.6414)	0.0112*** (3.3244)
<i>ROA</i>		0.2304*** (8.3191)	0.1940*** (7.1644)
<i>Lev</i>		-0.0510*** (-4.5212)	-0.0627*** (-5.5617)
<i>Age</i>		-0.0072*** (-12.1769)	0.0080 (1.5466)
<i>Growth</i>		-0.0010 (-0.7060)	-0.0016 (-1.1226)
<i>Cash</i>		-0.0033 (-0.3697)	-0.0172* (-1.9394)
<i>Institution</i>		0.0004*** (2.9792)	0.0004*** (2.9761)
<i>First</i>		-0.0001 (-0.2989)	0.0001 (0.6506)
<i>Boardsize</i>		0.0009 (0.8543)	0.0004 (0.4108)
<i>Indr</i>		-0.0094 (-0.3546)	-0.0097 (-0.3665)
<i>Constant</i>	-0.0492*** (-3.9004)	-0.0935 (-1.3813)	-0.2113*** (-2.7756)
<i>Industry</i>	Yes	Yes	Yes
<i>Year</i>	No	No	Yes
<i>N</i>	12,848	12,848	12,848
<i>Adjusted R2</i>	0.0153	0.1989	0.2550

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

5.2 Instrumental Variable Method

If strategic radicalization is an endogenous variable, the estimation results may be biased, so we used the instrumental variable method (Two-stage Least-squares regression, 2SLS) to treat the model. The lagged one-period strategic radicalization (L.Strategy) is used as an instrumental variable for strategic radicalization (Strategy) (Zhai et al., 2019). In terms of correlation, the lagged one-period strategic radicalization is highly correlated with the current year strategic radicalization, indicating that this instrumental variable satisfies the correlation. Meanwhile, there is no evidence that current-year corporate tax avoidance is correlated with lagged one-period strategic radicalization, i.e., this instrumental variable satisfies exclusivity. The coefficient of strategic radicalization (L. Strategy) in the first stage regression of Table 6 is 0.9365, which is significant at the 1% level, and the coefficient of strategic radicalization fitted (Strategy Predicted) in the second stage regression is 0.0011, which is significant at the 1% level, further supporting the hypothesis of this paper.

Table 6. Instrumental Variable Method

Variable	(1) First-stage	(2) Second-stage
	<i>Strategy</i>	<i>LRATE diff</i>
<i>Strategy Predicted</i>		0.0011*** (5.27)
<i>L.Strategy</i>	0.9365*** (322.95)	
<i>Size</i>	-0.0049 (-0.46)	0.0017* (2.43)
<i>ROA</i>	-0.5771 (-1.80)	0.3310*** (15.67)
<i>Lev</i>	-0.5115*** (-7.14)	-0.0576*** (-12.19)
<i>Age</i>	0.0051** (2.63)	-0.0012*** (-9.66)
<i>Growth</i>	1.1574*** (35.59)	-0.0005 (-0.23)
<i>Cash</i>	0.2637** (2.71)	-0.0301*** (-4.69)
<i>Institution</i>	0.0035* (2.43)	0.0006*** (6.77)
<i>First</i>	-0.0013 (-1.80)	0.0001 (1.10)
<i>Boardsize</i>	0.0142* (2.11)	0.0015*** (3.46)
<i>Indr</i>	-0.0762 (-0.35)	-0.0077 (-0.54)
<i>Constant</i>	1.0371*** (4.54)	-0.0233 (-1.54)
<i>Industry</i>	Yes	Yes
<i>Year</i>	Yes	Yes
<i>N</i>	10,479	10,479
<i>Adjusted R2</i>	0.918	0.102

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

6. Further Analysis

6.1 Equity Concentration

The equity concentration in a listed company determines the vesting of effective control and the supervisory function, and can have an impact on the degree of corporate tax avoidance. With a high degree of equity concentration, the majority shareholder holds the effective control and owns the control gains in addition to the rights and interests owned by both small and medium shareholders. In the exercise of control, the majority shareholder may ignore the rights and interests of small and medium shareholders for his own selfish interests, and may seek personal benefits through connected transactions, large loans, mergers and acquisitions, or even empty the company, resulting in the

"tunnel effect" (Li et al., 2004). Chen et al. (2010) found that when the shareholding of a listed company is more concentrated, the majority shareholder has higher tax avoidance benefits as well as higher tax avoidance costs and risks due to the higher shareholding ratio. When the corporate strategy is more radical, the majority shareholders will ignore the tax avoidance costs and risks to a certain extent. From the principal-agent theory, the corporate tax avoidance means create conditions for the majority shareholders and managers to encroach on the interests of the small and medium shareholders for their personal benefits. In order to test the heterogeneity of the role of equity concentration on strategic radicalization on corporate tax avoidance, this paper performs a sub-sample regression on the sample according to equity concentration. The regression results are shown in columns (1) and (2) of Table 7. The regression coefficient of strategic radicalization (Strategy) is 0.0008 and significant at the 1% level when the equity concentration is high; the regression coefficient of strategic radicalization (Strategy) is -0.0001 but insignificant when the equity concentration is low. This suggests that strategic radicalization promotes corporate tax avoidance more prominently when the concentration of corporate equity is high.

6.2 Quality of Internal Control

Table 7. Regression Test Results for Subgroups

Variable	High Concentration of Equity	Low Concentration of Equity	High-quality Internal Control	Low-quality Internal Control
	(1)	(2)	(3)	(4)
<i>Strategy</i>	0.0008*** (3.1532)	-0.0001 (-0.5693)	0.0001 (0.2841)	0.0010*** (4.0166)
<i>Size</i>	0.0046*** (5.0998)	0.0112*** (10.4165)	0.0062*** (5.3414)	0.0077*** (8.8665)
<i>ROA</i>	0.2445*** (9.7829)	0.3631*** (12.8735)	0.4383*** (14.9864)	0.1779*** (6.9224)
<i>Lev</i>	-0.0666*** (-9.7273)	-0.0692*** (-9.2306)	-0.0669*** (-8.9821)	-0.0691*** (-9.9386)
<i>Age</i>	0.0001 (0.4067)	-0.0004** (-2.0870)	-0.0004** (-2.3058)	0.0001 (0.7738)
<i>Growth</i>	0.0035 (1.2593)	0.0001 (0.0187)	0.0034 (0.9604)	-0.0024 (-0.8748)
<i>Cash</i>	-0.0288*** (-3.9048)	-0.0404*** (-4.7395)	-0.0299*** (-3.5877)	-0.0393*** (-5.1584)
<i>Institution</i>	0.0004*** (2.9427)	0.0003*** (3.1084)	0.0002* (1.7592)	0.0003*** (3.3305)
<i>First</i>	0.0001 (1.5576)	-0.0004*** (-3.2848)	0.0000 (0.6634)	0.0000 (0.5446)
<i>Boardsize</i>	0.0006 (1.0258)	-0.0014** (-2.2362)	-0.0005 (-0.7391)	-0.0001 (-0.1911)
<i>Indr</i>	-0.0047 (-0.2743)	-0.0228 (-1.1857)	-0.0137 (-0.6999)	-0.0147 (-0.8948)
<i>Constant</i>	0.0907*** (4.6245)	-0.0194 (-0.6922)	0.0664** (2.3948)	0.0404** (1.9939)
<i>Industry</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>N</i>	12,848	12,848	6,374	6,474
<i>Adjusted R2</i>	0.2719	0.2251	0.2047	0.2555

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

Yang et al. (2009) found that high-quality internal controls help reduce self-interest of corporate insiders and reduce both types of agency costs; Li et al. (2011) found that effective internal controls can inhibit underinvestment and overinvestment situations of companies, thus improving their investment efficiency; Doyle et al.'s (2007) study concluded that effective internal control systems can improve the quality and reliability of financial reporting. Firms need to use internal control systems to discipline the behavior of managers and control their tax avoidance behavior so that they can make the most efficient tax decisions. Companies with more effective internal controls are more careful about their tax avoidance behavior and more thorough in considering the costs and risks of tax avoidance. Therefore, strategic radicalization may be less effective in promoting corporate tax

avoidance when the quality of internal control is high. In this paper, the subsample with internal control index above the sample median is defined as the subsample with "high-quality internal control", and the subsample with internal control index below the sample median is defined as the subsample with "low-quality internal control", and the regressions are grouped together. The regression results are shown in columns (3) and (4) of Table 7, where the regression coefficient of strategic radicalization is 0.0001 but not significant when the internal control quality is high, and the regression coefficient of strategic radicalization is 0.0010 and significant at the 1% level when the internal control quality is low. This suggests that strategic radicalization promotes corporate tax avoidance more significantly when the quality of internal controls is low.

7. Conclusion

Strategic radicalization reflects a firm's acceptance of risk. Firms with higher strategic radicalization have greater acceptance of risk and more radical tax avoidance. Based on the strategy theory, this paper examines the influence of strategic radicalization on corporate tax avoidance by using China's A-share listed companies from 2007 to 2020, and concludes that: strategic radicalization has a significant positive influence on corporate tax avoidance, and the higher the strategic radicalization, the greater the degree of corporate tax avoidance. Furthermore, the conclusion still holds after the endogeneity test using individual fixed effects and instrumental variables method. Further study found that the higher the concentration of equity and lower the quality of internal control, the stronger the effect of strategic radicalization on corporate tax avoidance.

The research in this paper not only enriches the literature related to the economic consequences of strategic radicalization and the influencing factors of corporate tax avoidance, but also facilitates listed companies and their stakeholders to better understand the impact of corporate strategy types on their decision-making behavior. At the same time, this paper provides a theoretical basis for tax regulators to strengthen tax supervision of enterprises adopting radical strategies, and tax authorities should focus on enterprises adopting unconventional strategies to improve the efficiency of supervision.

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