

Corporate Social Responsibility, Family Firms and Tax Avoidance Behavior

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Abstract: *Recently, the society and public are more concerned about the fulfillment of social responsibility by enterprises, in addition to demanding that enterprises achieve economic benefits. As one of the more costly aspects of social responsibility, corporate tax payment in accordance with the law is of vital importance to both enterprises and the government. There are two competing views on the relationship between corporate social responsibility and tax avoidance, namely the risk management tool view and the corporate social responsibility culture view, each of which is inconclusive. In this paper, we are going to select companies that disclose CSR reports from 2013 to 2018 as a sample and use empirical research to explore the relationship between CSR disclosure and tax avoidance behavior, and further discuss the influence of the nature of family business enterprises on the relationship based on social emotional wealth theory. It helps investors and regulators to understand the tax avoidance motives of corporate social responsibility disclosure and facilitates the improvement of CSR disclosure system.*

Keywords: *Corporate Social Responsibility; Family Firms*

1. Introduction

Nowadays, while enterprises pursue economic benefits, the requirements of society and the public for enterprises to fulfill their social responsibilities are gradually strengthened. In September 2018, the Securities and Futures Commission revised and officially released “the Code on Governance of Listed Companies”, which requires listed companies to integrate environmental, social responsibility and corporate governance into their development strategies, further establishing the basic framework for environmental, social responsibility and corporate governance information disclosure. It further establishes the basic framework for environmental, social responsibility and corporate governance information disclosure, and clarifies the requirements for the fulfillment and disclosure of corporate social responsibility, and the fulfillment of corporate social responsibility gradually becomes one of the criteria for evaluating corporate performance. Among them, paying taxes in accordance with the law is one of the important elements of CSR, and enterprises have both the responsibility to fulfill CSR and pay taxes in accordance with the law, and the economic motivation to avoid taxes (Wei, 2017). Due to the imperfection of China's tax law system and the diversity of tax incentives and weak tax audits, it provides the possibility for enterprises to engage in tax avoidance. A large number of enterprises in China still choose to reduce their tax burden and obtain large tax benefits through tax avoidance behaviors. Tax avoidance by enterprises affects the allocation of national finance and public resources on the one hand, and violates the requirements of corporate social responsibility on the other.

Some scholars point out that tax avoidance can effectively affect the interests of enterprises and the public as well as the fulfillment of corporate social responsibility, and call for further research on the relationship between the two (Sikka, 2010). Theoretically, tax is a major expense for enterprises, and companies practicing tax avoidance need to consider the relationship between the magnitude of tax avoidance benefits and tax avoidance costs; tax avoidance benefits, including back taxes, late fees, and penalties, as well as potential damage to the external reputation of the enterprise (Yang et al., 2015). CSR disclosure, on the one hand, serves as part of corporate culture to influence companies to make them pay taxes according to the law, and on the other hand, it also serves as a means for companies to mitigate the consequences of corporate tax avoidance and enhance corporate tax avoidance behavior. As for family firms, due to their strong socio-emotional wealth motive they are more concerned about the social reputation of the firm (Berrone et al., 2012). At the same time, since most of the equity in family firms is held by family members, the supervision and audit of professional managers is stricter, which reduces the possibility of managers' appropriation of corporate wealth through tax avoidance (Chen et al., 2010).

Moreover, family firms do not always follow the profit maximization principle in their economic decisions and may make different decisions than non-family firms when it is necessary to maintain the family reputation (Chrisman et al., 2012), which makes it possible that the degree of CSR disclosure and tax avoidance may be different in family firms than in non-family firms[1-5].

Although most scholars have paid close attention to corporate disclosure and corporate tax avoidance, few scholars have studied the specific corporate nature of family firms in terms of socio-emotional wealth motives. Since family firms are more concerned with corporate reputation and stronger tax avoidance benefits, the impact of fulfilling social responsibility on family firms' tax avoidance tendency is worth studying. Therefore, based on the existing research background, this paper investigates the correlation between CSR disclosure and tax avoidance behavior, and examines the changes in the correlation between family firms and non-family firms based on the socio-emotional wealth theory.

Through combing the literature, it is found that most scholars' research on the relationship between CSR information disclosure and corporate tax avoidance is based on two perspectives, namely, social responsibility culture view and risk management tool view, for state-owned enterprises and private enterprises, while few scholars take family enterprises, a special private enterprise, as the research object. Focusing on the theory of corporate social emotional wealth, this paper studies the influence of social responsibility information disclosure of family enterprises on corporate tax avoidance behavior, which can enrich the research in the field related to the relationship between corporate social responsibility and tax avoidance behavior. In addition, the selection of family-owned listed companies for the study enriches the research object and provides more comprehensive empirical evidence for the improvement of the theoretical framework.

By studying the influence of CSR information disclosure on tax avoidance behavior of family enterprises, it provides tax authorities, auditing departments and other stakeholders with a new perspective on corporate tax avoidance and helps regulators to further explore the existing defects of CSR information disclosure; it is beneficial to corporate stakeholders to accurately identify the purpose of corporate social responsibility and identify the possible hidden motives behind the fulfillment of CSR. It is also beneficial to the improvement of CSR information disclosure system, and therefore has certain practical significance[6-8].

2. Literature review and institutional background

There are two main views on CSR for corporate tax avoidance, which are the cultural view of CSR and the risk management tool view.

The cultural view of CSR, which holds that companies fulfill their social responsibility due to their own strong sense of responsibility. The degree of CSR information disclosure is negatively related to the degree of corporate tax avoidance. The cultural view of CSR believes that being socially responsible is part of corporate culture, and Phillips and Freeman (2003) argue that corporations paying taxes according to the law has a positive impact on the community and the public. Companies engage in tax avoidance, which is considered unethical by the public and society is also considered as irresponsible socially responsible activities (Williams, 2007). Meanwhile, Williams (2007) further argues that companies should consider socially responsible activities as a corporate strategy, which represents their responsibility to the society, and this responsibility will make companies to reduce socially harmful tax avoidance behaviors. Zhai(2012) found that the better the social responsibility strategy developed by a company and the more adequate the social responsibility information disclosure, the less the company tends to be tax avoidant, based on the social contract theory of the company. (2012) find that the more socially responsible a company is, the less tax avoidance it engages in, using a sample of Australian listed companies. Then, Lanis and Richardson (2012) and Lanis (2014) used French and U.S. listed companies respectively to test and also reached consistent findings. Cao (2014) used Ranking's scores on CSR reports as an econometric basis and found that companies with higher CSR scores were less likely to engage in excessive tax avoidance practices. Li et al. (2016) used the amount of "public welfare donations" in accounting statements as a measurement basis and concluded that the more CSR is performed in private enterprises, the lower the degree of tax avoidance. Shin (2019) studied the social responsibility of enterprises to employees and found that enterprises with high social security contributions have less aggressive tax behavior. Yang et al. (2018) studied both turnover tax and income tax as corporate tax avoidance, and found that tax avoidance was higher for companies that disclosed social responsibility reports, and the negative correlation between the two was significant only for companies that should disclose the regulations. Using a case study approach, Wei(2017) analyzed GFSC, and the results showed that companies that actively participate in social responsibility do not tend to

over-avoid taxes. Zhang et al. (2019) studied manufacturing firms and found that firms that are responsible to shareholders, creditors, and consumers will inhibit their tax avoidance behavior.

The second is the risk management tool view, in which companies make social responsibility disclosures in order to gain a good moral reputation to offset the potential penalties they may receive in the event of a negative event. Under this view, the degree of corporate social responsibility disclosure is positively correlated with the degree of corporate tax avoidance. Godfery(2005) suggests that firms can generate moral reputation capital by actively fulfilling their social responsibilities, and moral reputation capital can provide firms with intangible assets similar to insurance. In the event of a negative corporate event, the public is more likely to perceive it as unintentional, thus reducing reputational and financial losses and contributing more to shareholder wealth. To prevent the occurrence of negative corporate events, it is necessary for companies to establish a positive moral reputation and corporate image in advance by actively fulfilling their corporate social responsibility. Godfery (2009) empirically demonstrated that companies with a better level of social responsibility fulfillment after their tax avoidance practices were discovered were more likely to be forgiven by the public. hoi et al. (2013) pointed out that if corporate social responsibility fulfillment and its disclosure can enhance corporate social reputation and offset the negative impact of corporate due to tax avoidance behavior, then companies may choose to engage in tax avoidance after fulfilling their social responsibility. Davis et al. (2015) studied the effect of CSR disclosure on corporate long-term tax avoidance behavior using a sample of U.S. listed companies and measuring the extent of corporate tax avoidance using the five-year average cash tax burden ratio, and found that social responsibility Firms with better performance had lower average cash tax liabilities and higher corporate tax administration expenditures. Sikka (2010) used a case study approach to analyze the Enron and WorldCom financial fraud cases, and found that some firms claimed to have corporate social responsibility but actually engaged in serious tax avoidance behavior. The corporate image shaped by these companies through social responsibility is deeply rooted and generally recognized by the public before major negative events occur in the companies. Yang et al. (2018) studied the disclosure of social responsibility information in China and found that the current social responsibility reports in China have low verifiability, high arbitrariness, and most reports are not independently audited by third parties. Huang and Yao (2016) analyzed the existence of the phenomenon of enterprises managing their own image by disclosing social responsibility reports in China. Tang, Wei and Li (2015) found that CSR is positively correlated with the degree of tax avoidance by studying private listed companies, and the positive correlation between the two is more significant in companies with dispersed equity or voluntary disclosure of social responsibility information. This indicates that at this stage, the social responsibility of private enterprises in China does not inhibit their tax avoidance behavior; on the contrary, social responsibility may become a tool for private enterprises to disguise their tax avoidance activities. Lu et al. (2015) found that the relationship between social responsibility and the degree of aggressive tax avoidance was more significant for companies with low transparency than for companies with high transparency, and the tax authorities were less supervised by companies that performed more social responsibility, which was more favorable for companies to practice tax avoidance. Zhang Chen et al. (2019) studied manufacturing companies from the stakeholder perspective and found that companies that take responsibility for their employees, government, and community promote tax avoidance behavior. Yang et al. (2015), using small and medium-sized private enterprises as research subjects, found that small and medium-sized private enterprises that separately disclose CSR information reports are more inclined to practice tax avoidance behaviors; the positive relationship between disclosure of social responsibility information and tax avoidance behaviors is more significant for small and medium-sized private enterprises in central and western regions compared to small and medium-sized private enterprises in eastern regions[9-13].

Some scholars have introduced the nature of corporate ownership into the study for analysis. Lanis et al. (2011) found that CSR can indirectly influence corporate tax avoidance behavior through the board of directors; in addition, he also suggested that independent directors are better able to restrain aggressive tax policies of the board of directors. Compared to state-owned holding companies, non-state-owned holding companies have lower effective tax rates and are more likely to choose more aggressive tax avoidance behaviors. After studying the effect of tax incentives on the relationship between state-owned shares and corporate tax burden, Wu (2009) finds that the higher the proportion of state-owned shares in a company, the higher its effective tax rate. Zhang (2013) suggested that compared to private enterprises, SOEs have been given social responsibilities from the very beginning of their establishment. Some studies have concluded that there is no significant correlation between social responsibility and tax avoidance of SOEs (Zhai, 2012). Zou (2018) applied the rent-seeking theory to explain the phenomenon that the degree of CSR disclosure is positively correlated with tax avoidance, and found that private ownership enterprises have a greater tendency to seek rent than SOEs, and that the disclosure of social

responsibility information significantly reduces the actual tax burden of enterprises, and the existence of political connections. The existence of political connections reinforces this relationship. Therefore, a large number of scholars have turned the research object to private listed companies.

Gomez-Mejia et al. (2007) proposed the theory of socio-emotional wealth, in which the main reference for family heads to make decisions is the socio-emotional wealth of the firm, and strategic decisions to reduce the financial risk of the firm will choose to protect the socio-emotional wealth of the firm if it is endangered. The family will choose the option of protecting the socio-emotional wealth. Vardaman and Gondo (2014) divided the socio-emotional wealth into internal and external dimensions, where the internal dimension includes the family's control over the firm, while the external dimension includes maintaining the good reputation of the firm. Lu et al. (2018) divided CSR into two categories: altruistic including environment and social good and self-interest including employees, customers and consumers, and other stakeholders. Berrone et al. (2012) suggested that family firms may have more motivation to maintain their good name to keep the family's honor intact. Wu and Zhang (2019) study that the greater emphasis on external dimensions compared to non-family firms leads to better charitable giving than non-family firms, while the focus on internally oriented dimensions leads to lower performance in employee responsibility than non-family firms. Dyer and Whetten (2006) propose that since the reputation of family firms is always linked to the whole family Chen et al. (2010) find that the presence of non-tax costs such as corporate reputation makes family firms less likely to engage in tax avoidance. Landry et al. (2013) find that social responsibility disclosure is positively related to tax aggressiveness in a sample of Australian listed companies. Family firms are less tax aggressive than non-family firms.

From the above literature, it can be found that domestic and foreign research on the influence of social responsibility information disclosure on corporate tax avoidance behavior is mainly based on the motives of corporate social responsibility report disclosure, which is divided into two opposing views: the view of corporate social responsibility culture and the view of risk management tools. In addition, in terms of the influence of corporate nature on the relationship between CSR disclosure and tax avoidance behavior, most of the literature studies the differences in the relationship between CSR disclosure and tax avoidance behavior between state-owned enterprises and non-state-owned enterprises, and the literature that takes family-owned enterprises as the research object is rarely involved. Based on the above research background, this paper mainly takes family-owned listed companies as the research sample and studies the correlation between corporate social responsibility information disclosure and the degree of tax avoidance based on social-emotional wealth theory, as well as the changes of the correlation between family firms and non-family firms[14-19].

3. Hypothesis development

References The risk management instrumental view sees corporate social responsibility as a way to prevent the adverse effects of tax audits government controls and other factors on corporate tax avoidance. The disclosure of social responsibility information can enhance the social reputation of the enterprise, and at the same time help to reduce the degree of tax department's audit of the enterprise's tax situation and conceal the enterprise's tax avoidance behavior. Enterprises fulfill their social responsibility more for economic motives, not really reflecting the spirit of public welfare and corporate responsibility (Zhai, 2012). The social responsibility of private enterprises in China does not inhibit their tax avoidance behaviors. On the contrary, social responsibility may become a tool for private enterprises to disguise their tax avoidance activities. Tang and Li (2015)

The social responsibility cultural view considers that taking social responsibility is part of corporate culture, i.e., it is believed that enterprises fulfill their social responsibility due to their own strong sense of responsibility. Fulfilling social responsibility as part of a company's culture and long-term strategy is considered to be a responsibility to society, and this responsibility will lead companies to curb any tax aggressive behavior that has a harmful impact on the well-being of society (Williams, 2007).

Based on the above analysis of the cultural view of CSR and the instrumental view of risk management, this paper proposes the following two competing hypotheses.

H1a: The degree of CSR disclosure is positively related to the degree of tax avoidance.

H1b: The degree of CSR disclosure is negatively related to the degree of tax avoidance.

For family firms, the family shareholders are the long-term strategic investors and controllers of the firm, Berrone et al. (2012) argue from the socio-emotional wealth theory that family firms place more

value on their reputation in all aspects. gomez-Mejia et al. (2007) argue that the pursuit of corporate economic interests is not the only goal of the firm, and when the economic motives of the firm conflict with the socio-emotional wealth family firms may make decisions that sacrifice economic interests in order to maintain their socio-emotional wealth (Zhang, 2014). Due to the high percentage of family members' shareholding and the long duration of shareholding in family firms, when most of the family's wealth is related to the family's shareholding in the firm, the damage caused to the firm through litigation costs and reputation loss will greatly affect the family's wealth (Berrone et al., 2012). The socio-emotional wealth theory suggests that behaviors such as reduced tax aggressiveness and greater social responsibility by firms are based on the consideration of protecting or enhancing the firm's socio-emotional wealth[20-21].

In the case where hypothesis H1a is satisfied, i.e., when CSR disclosure enhances corporate tax avoidance, as family firms lose their socio-emotional wealth when they engage in tax avoidance, and increase their socio-emotional wealth when they take on social responsibility. The amount of increase in a firm's socio-emotional wealth due to corporate tax avoidance is uncertain compared to the amount of decrease in its socio-emotional wealth due to corporate tax avoidance. In the case where hypothesis H1b is satisfied, i.e., when corporate social responsibility disclosure weakens corporate tax avoidance, family firms prefer to strengthen the negative relationship between the two since both undertaking social responsibility and reducing tax avoidance enhance corporate socio-emotional wealth.

Based on the above analysis of the impact of socio-emotional wealth on the relationship between corporate social responsibility and tax avoidance behavior in family firms, the following three competing hypotheses are proposed.

H2a: The nature of property rights of family firms will weaken the positive relationship between social responsibility disclosure and the degree of tax avoidance.

H2b: The nature of property rights of family firms strengthens the positive relationship between social responsibility disclosure and the degree of tax avoidance.

H2c: The nature of ownership of family firms strengthens the negative relationship between social responsibility disclosure and tax avoidance.

4. Research design

4.1 Sample and data

This paper selects the companies that disclose CSR reports among all A-share listed companies from 2013 to 2018 as the initial sample. According to the study, the sample was screened by the following steps: (1) Excluding ST listed companies to remove the influence of outliers. (2) Excluding the sample of financial industry, which applies different accounting policies from other industries and is therefore excluded. (3) Excluding companies whose current income tax expense is less than or equal to zero. (4) Excluding companies with effective tax rate less than or equal to 0. (5) Excluding the samples with other variables missing. Among them, all the corporate financial data were obtained from the CSMAR database, and the social responsibility score data were obtained from the Rankins CSR Ratings.

4.2 Related concepts and measurements

This paper investigates the influence of CSR disclosure on corporate tax avoidance behavior, using CSR disclosure as an explanatory variable. Since Ranking Global Ratings, as a third-party assessment firm, scores CSR reports disclosed by companies from various perspectives, it is widely recognized in the industry. This paper draws on the study of Tang and Li (2015) to measure CSR disclosure using the results of Ranking Global Ratings. Also, since the results of the Ranking Global Rating are on a percentage scale, the results of the Ranking Global Rating are divided by 100 as an indicator to measure the disclosure status of social responsibility reports in order to match the magnitude of the tax avoidance degree measure.

Corporate tax avoidance behavior is used as the explanatory variable, and there are various methods for measuring the degree of corporate tax avoidance, this paper uses the nominal tax rate minus the effective tax rate to measure the degree of corporate tax avoidance by referring to the method of Liu and Ye(2013).The Variables and definitions are as Table 1.

Table 1: Variables and definitions

Variable Type	Variables	Variable definitions
Dependent variable	RATE	Nominal tax rate - Effective tax rate
Independent variable	CSR	Score of Rankins CSR Ratings/100
	ROA	Net profit/total assets
	SIZE	Natural logarithm of total assets at the end of the period
	CINT	Fixed Assets / Total Assets
Control variables	LEV	Liabilities / Assets
	INVINT	Inventory/total assets
	INTANG	Intangible assets/total assets
	FAMILY	1 for family companies, 0 for non-family companies
	GROWTH	Operating income growth rate
	YEAR	Dummy Variables
	INDUSTRY	Dummy Variables

4.3 Model

To verify the above proposed hypothesis, this paper proposes the following model 1 for hypothesis 1 by referring to Lanis and Richardson (2012) and Liu and Ye(2013) to test the correlation between social responsibility disclosure status and corporate tax avoidance behavior. Meanwhile, based on model 1, the cross product term of CSR and FAMILY is added to further test hypothesis 2 to examine the impact and change in the degree of social responsibility disclosure of family firms on corporate tax avoidance behavior.

Model 1:

$$RATE = \partial_0 + \partial_1 CSR + \partial_2 ROA + \partial_3 SIZE + \partial_4 LEV + \partial_5 CINT + \partial_6 INTANG + \partial_7 INVINT + \partial_8 GROWTH + \partial_9 YEAR + \partial_{10} Industry + \varepsilon \quad (1)$$

Model 2:

$$RATE = \partial_0 + \partial_1 CSR + \partial_2 FAMILY + \partial_3 CSR * FAMILY + \partial_4 ROA + \partial_5 SIZE + \partial_6 LEV + \partial_7 CINT + \partial_8 INTANG + \partial_9 INVINT + \partial_{10} GROWTH + \partial_{11} YEAR + \partial_{12} Industry + \varepsilon \quad (2)$$

Empirical results

4.4 Summary statistics

Table 2 shows the summary statistics of the key variables. In this paper, a total of 3049 observations are involved, among which, there are 1108 family business variables. First, descriptive statistics are performed on the full sample information, and the results are shown in panel A. Then descriptive statistics are conducted on the sample of family firms, and the statistical results are shown in panel B

In terms of corporate tax avoidance indicators, the maximum value of RATE for the whole sample is 0.250, the minimum value is -0.718, and the standard deviation is 0.127, indicating that the tax burden of enterprises in China varies greatly. The mean value of RATE is 0.007 which indicates that overall, most enterprises have a nominal interest rate greater than the actual interest rate and there is tax avoidance. The maximum value of family enterprises is 0.247, the minimum value is -0.649, the standard deviation is 0.106, and the mean value is 0.022. The mean value of RATE of family enterprises is larger than the mean value of the whole sample, which indicates that the tax avoidance behavior of family enterprises is relatively stronger. From the aspect of corporate social responsibility, the maximum value of CSR for the whole sample is 0.89, the minimum value is 0.157, the standard deviation is 0.118, and the mean value is 0.417 indicating that the degree of fulfillment of social responsibility varies greatly among Chinese enterprises, and the overall fulfillment of social responsibility is lower than 0.5, and there is still more room for progress, and the government should actively guide and encourage enterprises to fulfill their social responsibility. The government should give positive guidance and encouragement to enterprises to fulfill their social responsibility, pay attention to the problem of the weak degree of

fulfillment of social responsibility in China, and enhance the sense of social responsibility of enterprises. The maximum value of CSR of family enterprises is 0.89, the minimum value is 0.156, the standard deviation is 0.100, and the mean value is 0.388. Although the mean value of CSR scores of family enterprises is lower than the mean value of the whole sample, among private enterprises, almost all enterprises that disclose CSR reports are family enterprises, and only a small number of non-family private enterprises have made CSR report disclosure, which can also indicate that among private enterprises, family enterprises fulfill more social responsibility, which is in line with the view of family enterprises' social-emotional wealth theory[22].

Table 2: Summary statistics

Panel A: Summary statistics					
Variable	N	Mean	Sd	Min	Max
RATE	3049	0.006	0.127	-0.717	0.250
CSR	3049	0.418	0.118	0.157	0.890
ROA	3049	0.049	0.043	0.001	0.482
SIZE	3049	23.217	1.431	19.951	28.509
LEV	3049	0.479	0.198	0.008	1.037
INVINT	3049	0.167	0.168	0.000	0.940
CINT	3049	0.229	0.187	0.002	0.948
INTANG	3049	0.050	0.079	0.000	0.791
GROWTH	3049	0.368	5.433	-0.863	251.211
Panel B: Family firms					
Variable	N	Mean	Sd	Min	Max
RATE	1108	0.022	0.106	-0.649	0.247
CSR	1108	0.389	0.100	0.157	0.890
Panel C: Non-Family firms					
Variable	N	Mean	Sd	Min	Max
RATE	1941	-0.003	0.137	-0.718	0.250
CSR	1941	0.435	0.124	0.184	0.867

Table 3 shows the Pearson correlation for the key variables. It can be seen that CSR is significantly and positively correlated with RATE at the 1% level and negatively correlated with ETR, indicating that CSR is positively correlated with the degree of tax avoidance.

Table 3: Pearson correlate matrix

	RATE	CSR	ROA	SIZE	LEV	Invint	Cint	Intang	Growth
RATE	1								
CSR	0.026***	1							
ROA	0.076***	0.069**	1						
SIZE	0.001**	0.447***	-0.058**	1					
LEV	-0.085**	0.176***	-0.562***	0.454**	1				
Invint	-0.027**	0.092**	-0.336***	0.253**	0.732*	1			
Cint	0.073***	0.063***	-0.259*	0.219***	0.192**	-0.379*	1		
Intang	-0.078***	-0.017**	0.034**	0.017*	-0.320**	-0.357**	0.176***	1	
Growth	-0.045***	-0.026***	0.463***	0.46***	0.043*	0.021**	-0.063*	-0.037**	1

4.5 The main results

Table 4 shows the main results of the OLS regression model. CSR is positively correlated with RATE at the 5% confidence level, with a regression coefficient of 0.046. This indicates that as CSR increases, the degree of corporate tax avoidance also increases, validating hypothesis H1a that the degree of CSR disclosure is positively correlated with the degree of tax avoidance, all else being equal. It indicates that the relationship between CSR and tax avoidance is consistent with the risk management instrumental view. Enterprises are more likely to enhance their corporate image and social reputation by fulfilling their social responsibility to reduce the potential risks arising from tax avoidance behaviors and thus increase their corporate revenue, and their fulfillment of social responsibility is more motivated by self-interest than their own sense of social responsibility.

After empirical testing of model 1, FAMILY as well as CSR*FAMILY are added to model 2 on the basis of model 1 to test the changes in the correlation between CSR and RATE in the specific corporate

nature of family firms. The regression results analysis table shows that FAMILY is negatively correlated with RATE at the 5% level, indicating a weaker propensity for tax avoidance among family-owned listed companies. To discuss the effect of family-owned listed companies on the relationship between CSR and tax avoidance, it is important to look at the change in the cross product term. CSR*FAMILY is positively correlated with RATE at the 1% level with a correlation coefficient of 0.109. It is thus clear that family-owned companies enhance the positive relationship between CSR and tax avoidance. This is consistent with hypothesis H2b. It indicates that the expected tax avoidance behavior of family firms is found to cost the firm less socio-emotional wealth than the increase in socio-emotional wealth of the firm due to the fulfillment of social responsibility by the firm.

ROA is significantly and positively correlated with RATE at the 1% confidence level with a regression coefficient of 0.799. This indicates that profitable enterprises are more inclined to engage in tax avoidance. Lev is significantly negatively correlated with RATE at the 1% level, the larger the size of the enterprise's debt, the less inclined the enterprise is to engage in tax avoidance. Invint is negatively correlated with RATE at the 1% level, the higher the inventory intensity, the lower the RATE, and the less inclined the enterprise is to engage in tax avoidance. Cint is negatively correlated with RATE at the 10% level, mainly because the higher the fixed asset content of the enterprise, the higher the depreciation of fixed assets, the lower the overall taxation of the enterprise, and the weaker the tendency of tax avoidance. Corporate development capability and the proportion of corporate intangible assets do not show a significant correlation with RATE.

Table 4: Main regression results

variables	Model1 RATE	Model2 RATE
CSR	0.046** (2.21)	0.023* (1.05)
FAMILY		-0.023** (-2.43)
CSRFAMILY		0.109*** (4.48)
ROA	0.799*** (13.87)	0.775*** (13.39)
SIZE	0.002 (0.99)	0.003 (1.53)
LEV	-0.044*** (-2.66)	-0.045*** (-2.73)
INVINT	-0.068*** (-3.18)	-0.064*** (-3)
CINT	-0.005* (-0.3)	-0.002 (-0.14)
INTANG	-0.040 (-1.32)	-0.041 (-1.35)
GROWTH	0.0239 (0.62)	0.0128 (0.33)
Constant	-0.077 (-1.64)	-0.103** (-2.13)
Observations	3,049	3,049
R-squared	0.182	0.189
F	21.00***	20.73***

The t-statistics re-reported in parentheses are based on standard errors clustered by firm.

*, **, *** denote significance at the 10%, 5%, and 1% level respectively.

4.6 Robustness check

Table 5 shows the robustness check. The tax avoidance indicator is subjected to multiple linear regression using BTD instead of RATE, and the regression results are shown in the following figure. Firstly, from the model as a whole, the F-value passes the significance test at 1% level, and the R-squared is 0.325 and 0.327, respectively, the model fits well, the VIF value is much less than 10, and there is basically no multicollinearity, and the model can be regressed for analysis. The regression results show that CSR and BTD are significantly positively correlated at the 5% level, and a larger BTD indicates a

higher degree of corporate tax avoidance, so CSR is significantly positively correlated with the degree of corporate tax avoidance, which is consistent with the previous results and in line with the content of the risk management tool view. With the inclusion of FAMILY*CSR, it can be seen that CSR is significantly positively correlated with BTD at the 10% level, which is consistent with the results of model 1. CSR*FAMILY is positively correlated with BTD at the 1% level, which is consistent with the results above, indicating that family firms enhance the positive correlation between CSR and tax avoidance submission, and the robustness is tested.

Table 5: Robustness check

variables	Model1 BTB	Model2 BTB
CSR	0.011** (2.36)	0.004* (1.71)
FAMILY		-0.010** (-2.44)
CSRFAMILY		0.024*** (2.62)
ROA	0.310*** (20.55)	0.310*** (20.29)
SIZE	0.001** (2.31)	0.001** (2.38)
LEV	-0.002 (-0.50)	-0.001 (-0.40)
INVINT	-0.013*** (-2.87)	-0.013*** (-2.86)
CINT	-0.009** (-2.43)	-0.009** (-2.38)
INTANG	-0.035*** (-2.93)	-0.034*** (-2.83)
GROWTH	0.505** (2.51)	0.477** (2.37)
Constant	-0.032*** (-3.11)	-0.031*** (-2.87)
R-squared	0.325	0.327

The t-statistics re-reported in parentheses are based on standard errors clustered by firm.

*, **, *** denote significance at the 10%, 5%, and 1% level respectively.

4.7 Additional tests

The companies were grouped according to their high and low social responsibility, with those below the mean in one group and those above the mean in another group, and multiple linear regressions were conducted on them respectively. The results are shown in Table 6. It can be seen that CSR above the mean is significantly and positively correlated with RATE at the 5% level, and CSR*FAMILY is significantly and positively correlated with RATE at the 1% level, which is consistent with the overall sample. However, the group with CSR below the mean, CSR is negatively but not significantly related to RATE, and CSRFAMILY is positively and significantly related to RATE. The negative correlation implies that the higher the social responsibility, the less strong the tax avoidance, and the cross product term attenuates this relationship between the two. It indicates that when the CSR score is low, social responsibility disclosure and tax avoidance tend to be more in line with the social responsibility culture view, and CSR disclosure is a more realistic reflection of the true corporate culture of the company. Meanwhile, the effect of CSR on tax avoidance is not obvious when CSR scores are low, and the nature of family business has more influence on tax avoidance.

Table 6: Additional tests

Variables	HIGH CSR		LOW CSR	
	RATE	RATE	RATE	RATE
CSR	0.0837** (2.30)	0.0722** (1.97)	0.0215 (0.35)	-0.0275 (-0.44)
FAMILY		-0.0205 (-1.21)		-0.0328** (-2.50)
CSRFAMILY		0.0932*** (2.69)		0.150*** (3.69)
ROA	0.860*** (9.70)	0.842*** (9.5)	0.769*** (10.01)	0.745*** (9.63)
SIZE	0.00212 (0.71)	0.00310 (1.04)	0.00219 (0.68)	0.00309 (0.95)
LEV	-0.0502* (-1.94)	-0.0489* (-1.9)	-0.0355 (-1.61)	-0.0362* (-1.65)
INVINT	-0.0224 (-0.65)	-0.0175 (-0.51)	-0.0924*** (-3.34)	-0.0876*** (-3.18)
CINT	0.0310 (1.24)	0.0366 (1.47)	-0.0294 (-1.25)	-0.0289 (-1.23)
INTANG	0.0148 (0.34)	0.0155 (0.36)	-0.0648 (-1.47)	-0.0633 (-1.44)
GROWTH	0.000161 (0.41)	0.00005 (0.15)	0.000534 (0.56)	0.000465 (0.49)
Constant	-0.118* (-1.83)	-0.147** (-2.22)	-0.0591 (-0.79)	-0.0699 (-0.92)
Observations	1,229	1,229	1,820	1,820
R-squared	0.206	0.216	0.183	0.190
F	10.04***	9.95***	11.01***	8.74***

The t-statistics re-reported in parentheses are based on standard errors clustered by firm.

*, **, *** denote significance at the 10%, 5%, and 1% level respectively.

5. Conclusion

This paper investigates the relationship between CSR information disclosure and tax avoidance from the motive of corporate social responsibility, and further investigates the influence of the corporate nature of family business on the correlation between the two based on the social emotional wealth theory of family business. The enterprises that disclosed social responsibility reports from 2013-2018 were selected as the sample for the empirical study, and the findings are as follows.

First, the better the disclosure of CSR information, the higher the degree of corporate tax avoidance. It indicates that enterprises use the fulfillment of social responsibility more as a tool to reduce a series of risks when corporate tax avoidance is discovered, rather than out of the requirements of their own ethical codes. Secondly, the nature of family business strengthens the positive relationship between CSR disclosure and tax avoidance. Finally, in the high CSR group, the better the CSR disclosure, the higher the degree of tax avoidance and the stronger the positive correlation between the two in family enterprises, which is consistent with the overall sample results. In the low CSR group, the better CSR disclosure, the lower the degree of tax avoidance but not significant, and in family firms, the correlation between the two is weakened. It indicates that when CSR itself is low, the effect of CSR on tax avoidance is small, while the nature of the family business enterprise itself will affect the corporate tax avoidance behavior to a greater extent.

The findings of this paper are conducive to the improvement of CSR information disclosure mechanism by regulatory authorities. It provides theoretical support for the taxation department to develop a new perspective of anti-tax avoidance from the aspect of CSR, and is beneficial for the government to strengthen market supervision to improve laws and regulations and strengthen enterprises' own sense of social responsibility. Provide a basis for stakeholders to correctly insight into the motives of enterprises to fulfill their social responsibility

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