

The Relationship Between Tax Incentives, Financial Performance And CSR - Evidence from Chinese listed companies

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Abstract

This research uses listed company data from the China A-share market from 2008 to 2018 as its research sample, takes financial performance as the mediator, and uses the mediation test model to study the effect of China's tax incentive policies on corporate social responsibility. The results show that direct tax incentives can better stimulate the CSR of all companies, and part of the incentive effect is realized through financial performance, especially for state-owned enterprises and non-manufacturing enterprises. Indirect tax incentives have a significant incentive effect just on the CSR of non-manufacturing enterprises, and part of the impact is also realized through financial performance.

Keywords: Corporate social responsibility, Tax incentives, Financial performance, Mediating effect.

1. Introduction

Corporate Social Responsibility (CSR) is a corporation that deliberately integrates its commercial activities with stakeholders and social responsibility and environmental concerns in its operations. And the stakeholders should include shareholders, investors, staff, clients, vendors, governments and communities, and so on. The social economy and the sustainable growth of businesses may both benefit greatly from fulfilling social responsibility. Actively carrying out corporate social responsibility would not only improve the company's reputation but also its capacity to get funding and core competitiveness [1].

Asia's largest rising economy is China. Government regulation and corporate dependence on politics have an impact on CSR development. China's government is essential in fostering CSR by creating pertinent laws and rules that direct business activity [2]. China's CSR has advanced

significantly after the issuance of a number of legislation and incentives by the government in 2000. Among many incentive policies, tax preference is a fiscal policy that aims to stimulate CSR directly by acting on corporate tax burden. Most of these preferential tax policies come from tax policy reforms. The new corporation income tax legislation, which became effective in 2008, is the first direct taxation reform. The tax reform gives businesses extra tax breaks for implementing energy and environmental protection, fostering technological advancement, creating jobs, and making charitable contributions. The second reform is the indirect tax reform. Indirect tax reform includes two aspects. For a while in 2009, consumer added-value tax (VAT) replaced production VAT. And the other is the 2012-2016 VAT instead of business tax. The two key indirect tax revisions are meant to ease the financial burden on firms while also enhancing their potential for technological innovation.

The implementation of CSR requires adequate financial support. Sufficient financial funds can provide necessary human and material resources for the implementation of CSR. In other words, the adequacy of financial funds affects the willingness of operators to perform CSR and the quality of CSR [3,4]. Tax reform can reduce business costs and improve financial performance through various methods of tax reduction and exemption. This provides a good opportunity for enterprises to improve their financial performance and implement CSR. This study hopes to verify whether tax incentive policies can affect CSR implementation by affecting corporate financial performance through the study of China's A-share market. The research will examine the ways in which tax incentives act on CSR by testing the mediating effect of financial performance.

2. Literature review

This study explores the relationship between tax incentives, financial performance and CSR. So here's a review of their research.

2.1 Relationship between tax incentive and CSR

Most scholars study the incentive effect of tax policy on the individual CSR project. Common CSR projects include Research and Development (R&D) innovation, charity, energy conservation and environmental protection. Wallsten (2000), through an evaluation of the US Small Business Innovation Research Program, found that tax incentive policies have a crowding out effect on R&D expenditures [5]. Thomson (2017) studied the R&D data of 29 industries in 26 OECD countries from 1987 to 2006 and finds that in the long run, tax incentives will bring more R&D costs [6]. In Boatsman and Gupta (1996)'s study, they used panel survey data from 212 donor companies in 1984-1988 using public management agencies to estimate cross- and time-series hybrid models, random effects models, and fixed-effect models, then concluded there is a

negative correlation between the amount and the marginal tax rate, that is, the lower the tax rate, the more donations [7]. Oates (1995) believes that pollution taxes (such as environmental taxes) can not only reduce pollution activities, increase government revenue, but also provide important incentives for research and development and improvement of emission reduction technologies [8]. Li and Yi (2014) texted regression analysis of 186 U.S. cities, and the results show that the city with a local fiscal stimulus deployed 69% more than not have this kind of policies and measures of urban ability of solar photovoltaic system, at the same time have a renewable portfolio standard (RPS) deployed cities than not have this kind of policies and measures of more than 295% of the solar photovoltaic system [9].

2.2 Relationship between tax incentive and financial performance

Stephen (2014) analyzed the impact of Uganda's regional tax incentives on the financial performance of manufacturing enterprises. Its results show that the increase in sales of enterprises enjoying tax incentives is better than that of other enterprises [10]. Czarnitzki, Hanel, and Rosa (2011) found through the Canadian innovation survey conducted by statistics Canada in 1999 that the recipients of tax credits realized more product innovations and increased the sales share of new and improved products [11]. Guan and Yam (2015) by studying the Beijing manufacturing companies in China from 1993 to 1995, the survey questionnaire, found in the special loan fiscal incentives and tax credits and the innovation of Beijing manufacturing company sales and profits are significant positive correlation [12]. Song, Zhao and Zeng (2017) studied the 2007–2011 link between Chinese listed firms' environmental management and financial success [13].

2.3 Relationship between financial performance and CSR

On the one hand, Waddock and Graves (1997); Hillman and Keim (2001) found that better corporate social performance can bring surplus funds, which will be returned to stakeholders [3,4]. This leads to a virtuous circle between corporate social performance and financial performance [14,15]. Scholars with similar conclusions also include Chen and Wang (2011). Xiong et al. (2016). On the other hand, some scholars have shown that the relationship between financial performance and CSR is negative. For example, Preston and O'bannon (1997) believed that the higher the level of CSR, the higher the cost, and the lower the financial performance, thus reducing the socially responsible investment. Therefore, there may be a negative correlation between CSR and financial performance, which is easy to form a vicious circle [16].

In general, most scholars study the pair relationship between tax incentives, financial performance and CSR, and few study to put these three together. There is no research on whether financial performance plays a role in the transmission of tax incentive to CSR. This paper is to

study whether tax incentives affect CSR through financial performance. This can provide empirical support for the path of tax incentive CSR

3. Research method

3.1 Samples and Data

China A-list businesses from the Shanghai Stock Exchange and the Shenzhen Stock Exchange between 2009 and 2018 were chosen for this study's research samples. The total number of enterprise samples is 4937. According to the nature of enterprises, 3,607 samples of state-owned enterprises and 1,330 samples of non-state-owned enterprises were obtained. According to the nature of industries, 2375 samples of manufacturing enterprises and 2562 samples of non-manufacturing enterprises were obtained.

The data mainly comes from RKS database, the corporate annual financial report, the CSR report. Selection of data follow the rules: (1) Companies that exclude the financial insurance industry. Because the accounting system of the financial management industry is quite different from that of other companies, this will cause the composition of corporate financial statements to be different from other companies. (2) Excluding the Special Treatment (ST) companies. ST companies have a large financial fraud risk, so they should be eliminated. (3) Excluding other companies with missing data.

3.2 Variables

3.2.1 Dependent variable(DV)

This study will use China's Rankins CSR Ratings (RKS) to measure CSR. RKS is a measurement index system based on ISO26000 international liability standard. Since ISO26000 is based on the international standard scheme for multi-stakeholder accountability, the RKS normal is based on stakeholder theory. The indicator program establishes four zero-level indicators, including overall, content, technology and industry. Additionally, 15 first-level indicators were devised, including "strategy," "stakeholders," "labor and human rights," "fair operation," and others. These indicators are ultimately scored by structured experts. Lau et al. (2016) examined the effect of corporate governance processes on CSR performance in emerging economies in China using RKS ' CSR assessment outcomes [17]. Other scholar such as Luo, et al. (2013); Marquis and Qian (2014); Pan, et al. (2018) are also using RKS data to measure CSR in their studies [18-19].

3.2.2 Independent variable (IV)

The tax incentives in this study will be divided into direct tax incentives and indirect tax incentives. Direct tax incentives are measured using direct tax burden (DTB). Indirect tax incentives are measured using the

indirect tax burden (ITB). In China, according to Xu (1999), the actual tax burden can be expressed by dividing the total amount (all taxes and fees paid) by the total disposable financial resources of the enterprise [20]. Lou (2007) believes that the total tax burden of the enterprise is the sum of the main business tax and additional income tax divided by the total assets [21]. This research adopts Lou (2007) 's view to calculate the overall tax burden of the enterprise, and decomposes the direct tax burden and indirect tax burden. Direct tax burden (DTB) be expressed by dividing the income taxes payable by the total assets. Indirect tax burden (ITB) be expressed by dividing the business tax and surcharges by the total assets [21].

3.2.3 Mediating variable (MV)

Mediating Variable are usually used to test mediating effect. Mediating effect means that when there isn't only a straightforward causal connection between the independent variable X and the dependent variable Y, the correlation is achieved by a mediating variable M. The purpose of this research is to explore whether tax incentives will affect CSR through the financial performance. Slack resource theory argues that better financing can lead to the availability of idle (financial and other) resources that provide possibilities for businesses to invest in social performance fields (such as community relations, staff relationships, or the environment). If there are idle resources, better social performance will be generated by allocating these resources to the social sector, so better financial performance will be a predictor of better CSR [22,14,23]. McGuire (1988); Chen and Wang (2011); Kao et al. (2018) and other scholars' research conclusions support the theory. This research focus on Chinese listed companies. The market indicators of listed companies can fully reflect the evaluation of investors' performance of companies. Among many market indicators, net assets per share(NAPS) can not only explain the stock price the most, reflecting the company's market performance, but also measure the company's own wealth [24]. Therefore, this study selects net assets per share to be the intermediary variables.

3.2.4 Control variable (CV)

In the research of factors affecting CSR, the companies size, asset-liability ratio

, proportion of independent directors, and concentration of shares are often used to analyze [25-29,23,17]. So this study selected common factors affecting CSR including companies size, asset-liability ratio, proportion of independent directors, and concentration of shares.

All the above variables and explanations are reflected in Table 1.

Table 1 Variable definitions

Item	Variable name	Variable description
IV	Direct tax burden (DTB)	income taxes payable / total assets
	Indirect tax burden (ITB)	business tax and surcharges / total assets
DV	CSR	use RKS CSR index as CSR substitution variable.
MV	Net assets per share (NAPS)	total shareholder equity / total equity stock denomination
CV	Size (SIZE)	total assets
	Asset-liability Ratio (AL)	total liabilities / total assets
	Proportion of Independent Directors (PID)	number of independent directors / board size
	Concentration Of Shares (COS)	number of shares held by the top ten shareholders / total number of shares.

3.3 Research hypotheses

Firstly, according to the theory of positive externalities, CSR behaviors have strong positive externalities. In order to compensate for the losses incurred by companies during performance and encourage them to continue to perform, the government needs to make certain economic compensation. Then, according to the Pigou tax theory, tax incentive is one of the ways that the government compensates and encourages solving positive externalities [30]. Finally, Castellacci and Lie (2015); Barnea et al. (2013); Xu and Zeng (2016) have demonstrated that tax preferential policies can stimulate companies' R&D investment, charitable donation and energy conservation and environmental protection [31-33]. That is to say, the more tax credits companies get, the more willing they are to engage in the above behaviors. Based on the above theory and research results, this study proposes the following hypotheses:

H1: Tax incentive policies can affect CSR

Secondly, according to the theory of positive externality, the government internalizes the spillover costs or benefits of companies by giving relevant policies, which is a way to influence company behaviors by regulating company financial performance [33] (Freeman, 1984). In addition, according to the Pigou tax theory, tax incentives can reduce

the tax burden of Certain behaviors of companies by giving certain preferential policies, which is conducive to the improvement of company performance[30] (Pigou, 1920). Finally, Czarnitzki et al. (2011); Guan and Yam (2015); Song et al. (2017) and other scholars have demonstrated that tax incentive can improve corporate financial performance. In other words, the more tax credits a company gets, the higher its financial performance a company will gain. Based on the above theoretical and empirical results [11-13]. This study proposes the following hypotheses:

H2: Tax incentives can affect financial performance

Thirdly, according to the resource slack theory, better financial performance will generate idle resources, so that enterprises can invest these idle resources into community and society, employee relations or environment and other social responsibility fields [3]. In addition, McGuire et al. (1988); Xiong et al. (2016) and other scholars have stated that there is a positive effect of early financial performance on the current CSR [22,15]. That means the higher the level of financial performance in the early period, the better the CSR performance in the current period. Therefore, hypothesis is proposed in this study:

H3 : Financial performance can affect CSR and has mediating effect.

3.4 Model construction

3.4.1 Principle of model construction

The research idea is to use financial performance as a mediating variable to study the impact of tax incentive policies on CSR.

The research model will be based on the mediating model proposed by Wen et al. (2004), which combines Causal Steps Approach with soble test [34-36]. This model can solve two important research problems:

- (1) Whether tax incentives have a direct impact on CSR.
- (2) Whether financial performance plays a mediating effect in the impact of tax incentives on CSR.

The mediating model proposed by Wen et al. (2004) is as follows:

$$Y = aX + \varepsilon \quad (1)$$

$$M = bX + \varepsilon_1 \quad (2)$$

$$Y = a'X + cM + \varepsilon_2 \quad (3)$$

Detection steps:

Firstly, verify the coefficient a in equation (1). Secondly, verify the coefficient b in equation (2). Finally verify the coefficient c and a' in equation (3). According to the Test of Joint Significance judge the result:

- (1) When a is not significant, stop the detection of mediator.
- (2) If the a , b , c and a' are all significant, that means the mediating effect of M is significant, which is the partial mediating effect.
- (3) If the a , b , and c are significant, but a' is not significant, then M is the complete mediating effect.

Because the situation of complete mediating effect is rare [35], According to Preacher and Hayes (2008), the idea of total mediation should be abandoned and all mediating effects should be treated as partial mediating effects [37].

- (4) When at least one of b and c is not significant, perform the soble test. If the result is significant, it means that M 's mediating effect is significant. Otherwise, it is not significant.

3.4.2 Multiple regression model

According to the above mediating effect test model, the multiple regression model groups of direct tax and indirect tax are established respectively.

Model group 1: Mediation effect model under direct tax incentive

$$CSR_{i,t} = \alpha_0 + \alpha_1 DTB_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 AL_{i,t} + \alpha_4 COS_{i,t} + \alpha_5 PID_{i,t} + \varepsilon_{i,t} \quad (1-1)$$

$$NAPS_{i,t} = b_0 + b_1 DTB_{i,t} + b_2 SIZE_{i,t} + b_3 AL_{i,t} + b_4 COS_{i,t} + b_5 PID_{i,t} + \varepsilon_{i,t} \quad (1-2)$$

$$CSR_{i,t} = c_0 + \alpha'_1 DTB_{i,t} + c_1 NAPS_{i,t} + c_2 SIZE_{i,t} + c_3 AL_{i,t} + c_4 COS_{i,t} + c_5 PID_{i,t} + \varepsilon_{i,t} \quad (1-3)$$

Model 1-1 can test the direct effect of DTB on CSR. The entire model group 1 can test the mediating effect of NAPS in the relationship between DTB and CSR.

Model group 2: Mediation effect model under indirect tax incentive

$$CSR_{i,t} = \alpha_0 + \alpha_1 ITB_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 AL_{i,t} + \alpha_4 COS_{i,t} + \alpha_5 PID_{i,t} + \varepsilon_{i,t} \quad (2-1)$$

$$NAPS_{i,t} = b_0 + b_1 ITB_{i,t} + b_2 SIZE_{i,t} + b_3 AL_{i,t} + b_4 COS_{i,t} + b_5 PID_{i,t} + \varepsilon_{i,t} \quad (2-2)$$

$$CSR_{i,t} = c_0 + \alpha'_1 ITB_{i,t} + c_1 NAPS_{i,t} + c_2 SIZE_{i,t} + c_3 AL_{i,t} + c_4 COS_{i,t} + c_5 PID_{i,t} + \varepsilon_{i,t} \quad (2-3)$$

Model 2-1 can test the direct effect of ITB on CSR. The entire model group 2 can test the mediating effect of NAPS in the relationship between ITB and CSR.

4. Results and analysis

In this study, Eviews software was used for data processing and analysis, and the results are as follows.

4.1 Statistical description

Table 2 Statistical description of overall sample variables

Variables	CSR	NAPS	DTB	ITB	SIZE	COS	AL	PID
Mean	40.0531	5.6555	0.0098	0.0093	2.70E+11	0.5923	0.5480	0.3738
Median	36.6752	4.6876	0.0073	0.0044	1.44E+10	0.5934	0.5633	0.3636
Maximum	89.2979	48.8513	0.1197	0.4893	2.77E+13	0.9859	1.3518	0.8000
Minimum	11.6900	-4.4215	-0.0353	-0.0026	3.07E+08	0.1271	0.0156	0.0909
Std. Dev.	13.9582	3.7899	0.0107	0.0193	1.65E+12	0.1730	0.2035	0.0597
Observations	4937	4937	4937	4937	4937	4937	4937	4937

Data source: Guotai Junan Database

Table 3 Correlation coefficient table of overall sample

Correlation	CSR	NAPS	DTB	ITB	SIZE	COS	AL	PID
CSR	1.000000							
NAPS	0.2954***	1.0000						
DTB	-0.0436***	0.0837***	1.0000					
ITB	0.0325**	0.0032	0.3021***	1.0000				
SIZE	0.3436***	0.0862***	-0.0844***	-0.0305**	1.0000			
COS	0.3360***	0.1577***	0.0801***	0.1224***	0.2163***	1.0000		
AL	0.2311***	0.0781***	-0.3246***	-0.0736***	0.2607***	0.0839***	1.0000	
PID	0.0519***	0.0085	-0.0010	0.0384***	0.0087	0.0717***	0.03730***	1.0000

*** p<0.01, ** p<0.05, * p<0.1

According to Table 2, the average values of CSR, NAPS, DTB and ITB are 40.0531, 5.6555, 0.0098, 0.0093. Their median values are 36.6752, 4.6876, 0.0073, 0.0044. According to the Table 3, the correlation coefficients between most variables are less than 0.5, and there is very little multicollinearity.

This study divides the company sample into two ways. One is to categorize the businesses into State-Owned (SOE) and Non-State-Owned (NSOE) firms based on their nature. Depending on the kind of industry, one is separated into Manufacturing Enterprises (ME) and Non-Manufacturing Enterprises (NME).

4.2 Tax incentive effect

Table 4 The effect of direct tax incentives on CSR

model	M1-1	M1-2	M1-3		Whether to perform soble test	Mediating effect NAPS
coefficient	α_1	b_1	c_1	α'_1		
variable	DTB	DTB	NAPS	DTB		
SOE	-82.5622***	-12.3651**	1.1050***	-68.8984***	N	16.50%
NSOE	-38.7918*	-2.7850	0.5423***	-37.2814*	Y	3.89%
ME	-44.0878**	-0.1231	0.4827***	-44.0283**	Y	0.14%
NME	-77.0717***	-14.4764**	0.9738***	-62.9745***	N	13.80%

*** p<0.01, ** p<0.05, * p<0.1

N- Not to perform soble test

Y- Perform soble test

Table 5 The effect of indirect tax incentives on CSR

model	M2-1	M2-2	M2-3		Whether to perform soble test	Mediating effect NAPS
coefficient	α_1	b_1	c_1	α'_1		
variable	ITB	ITB	NAPS	ITB		
SOE	-9.3401	/	/	/	N	/
NSOE	-29.7455	/	/	/	N	/
ME	108.9181***	-6.3426	0.4956***	112.0614***	Y	-2.89%
NME	-146.4609***	-42.7278***	0.9279***	-106.8143***	N	27.10%

*** p<0.01, ** p<0.05, * p<0.1

N- Not to perform soble test

Y- Perform soble test

The results of Table 4 and Table 5 are summarized into Table 6

Table 6 Summary of the test results of the effect of tax incentives on CSR

Relationship	DTB-NAPS-CSR		ITB-NAPS-CSR	
	Direct effects of DTB	Mediating effect of NAPS	Direct effects of ITB	Mediating effect of NAPS
Sample				
SOE	Significant (-)	Exist (16.50%)	Not significant	/
NSOE	Significant (-)	Exist (3.89%)	Not significant	/
ME	Significant (-)	Exist (0.14%)	Significant (+)	Exist (-2.89%)
NME	Significant (-)	Exist (13.80%)	Significant (-)	Exist (27.10%)

According to Table 4, the coefficient α_1 is significant and negative for all samples. This suggests that direct tax incentives have a significant impact on the CSR of all sample enterprises. The lower the direct tax

burden is, the higher the CSR level of the enterprise will be. And part of the impact is through financial performance. Financial performance finance has mediating effect on the relationship between direct tax incentive and CSR. The mediating effect of financial performance in state-owned enterprises and non-manufacturing industry is stronger, which is 16.50% and 13.80% respectively

As can be seen from Table 5, the coefficient A of state-owned enterprises and non-state-owned enterprises is not significant, which indicates that the incentive effect of indirect tax incentive on enterprises classified by nature is not obvious. This result also shows that mediation effect detection is not necessary. Indirect tax incentives only have significant direct effect on the CSR of the manufacturing enterprises and non-manufacturing enterprises. And financial performance finance has mediating effect in both cases. Influence of indirect tax incentive on non-manufacturing industry is reversed, that is, the lower the tax burden, the higher the CSR level of enterprises. The mediating effect of financial performance in non-manufacturing industry is very strong, which is 27.10%. This indicates that indirect tax incentives can promote the improvement of CSR in non-manufacturing industries. However, indirect tax has a positive effect on the manufacturing industry, which indirect tax incentive failed to promote the CSR of manufacturing enterprises

4.3 Robustness test

To test the stability of the two model groups, a robustness test will be performed. Model Group 1 and Model Group 2 will lag the IV and MV by one period to verify the time continuity of the impact of tax incentives. The test results are as follows:

Table 7 Robustness test results on the impact of DTB on CSR

model	M2-1	M2-2	M2-3		Whether to perform soble test	Mediating effect
coefficient	α_1	b_1	c_1	α'_1		
variable	DTB(-1)	DTB(-1)	NAPS(-1)	DTB(-1)		NAPS(-1)
SOE	-72.4045***	-9.3681*	0.8457***	-64.4822***	N	10.9%
NSOE	-61.34596***	-8.1270	0.4657***	-57.5609**	Y	6.17%
ME	-70.6645***	-0.1910	0.4645***	-70.5758***	Y	0.126%
NME	-74.7742***	-13.4258**	0.6896***	-65.5152***	N	12.4%

*** p<0.01, ** p<0.05, * p<0.1

N- Not to perform soble test

Y- Perform soble test

Table 8 Robustness test results on the impact of ITB on CSR

model	M3-1	M3-2	M3-3		Whether to perform soble test	Mediating effect
coefficient	a	b_1	c_1	α'_1		
variable	ITB(-1)	ITB(-1)	NAPS(-1)	ITB(-1)		NAPS(-1)
SOE	5.7768	/	/	/	N	/
NSOE	-45.3880	/	/	/	N	/
ME	88.7221***	-8.9267*	0.4814***	93.0197***	N	-4.84%
NME	-118.3266***	-35.2775***	0.6518***	-95.3340***	N	19.4%

*** p<0.01, ** p<0.05, * p<0.1

N- Not to perform soble test

Y- Perform soble test

The robustness test results are similar with the findings of the tests mentioned above, as shown in Tables 7 and 8. All sample businesses' CSRs are significantly impacted by direct tax incentives. In all samples, financial performance financing has a mediating influence on the link between direct tax incentives and CSR; however, this effect is more pronounced in state-owned firms and the non-manufacturing sector.

Indirect tax incentives still only have significant direct effect on the CSR of the manufacturing enterprises and non-manufacturing enterprises. Influence of indirect tax incentive is reversed with CSR only on non-manufacturing industry

5. Conclusion

In China, direct tax incentives can significantly affect the CSR of all companies. And this incentive effect is partly realized through financial performance. In other words, financial performance can play a part of the mediation role in the path of direct tax incentives affecting CSR. When the direct tax incentive effect is greater, the financial performance level is higher, which leads to the higher the CSR level. Among them, Financial success in state-owned businesses has a larger mediation influence than in privately held businesses. It was stronger in non-manufacturing firms than in manufacturing enterprises. However, China's indirect tax incentive policies only have a significant impact on the CSR of non-manufacturing enterprises, and partly through financial performance. It can be seen that under the comparison of the two tax policies, direct tax incentives are more conducive to the improvement of the CSR level of all enterprises. Indirect tax incentives are more conducive to the development of CSR in non-manufacturing enterprises.

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