

Corporate social responsibility and financial performance: impact of regional variance between western and eastern China

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Abstract. The article studies how firms' corporate social responsibility (CSR) responds to firms' financial performance, and how firms' location of western or eastern part of China moderates the association between CSR and financial performance. Although there are increasingly initiatives of CSR and China's firms have engaged in more CSR practices, the imbalance of CSR concerns and economic developments exists across western and eastern part of China. By using the hierarchical regression approach for a sample of 635 Chinese listed companies in the year of 2014, the empirical results provide evidences that CSR is positively associated with firms' financial performance and the domestic regional variance the firms located acts as a role of moderation. Results also find that CSR of eastern listed firms has a significant influence on financial performance, and there is no significant association between CSR and financial performance in western listed firms. This article also specifically explains possible reasons of low CSR engagement in China and examines moderating effect of the discrepancy of social and economic circumstance on CSR-financial performance link in emerging market like China.

Key words. Corporate social responsibility, Financial performance, Eastern and western, Regional variance, China

1. Introduction

Considerable concerns in the literature have been given to the corporate social responsibility (CSR) over the past decades. Even though a great amount of studies on CSR focused on developed countries existed (Xiao, et al., 2011), there is limited understanding on how CSR is perceived and applied by companies in developing

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countries, especially in China, which is the prominent emerging market. The first CSR report in China was released by Shell China in 1999, after that there are more and more voluntary CSR information disclosed by Chinese listed firms either in annual reports or individual reports (Kolk, et al., 2007). The idea of how to balance economic development and social growth is receiving growing concerns by the general public. Especially, recently Chinese society had witnessed more and more social and environmental accidents, e.g. SanLu injurious milk powder, pollution of the river by the explosion hazard of Jilin Petrochemical, etc. Chinese entrepreneurs have begun to pay growing attention to the CSR (Wang, et al., 2010). According to the statistics from RKS China CSR database, in 2015 there were totally 701 China's listed firms publicly launched CSR reports, comparatively only 26 listed firms in 2006.

Recent studies have found that companies may disclose their CSR practices through either annual report (Gray, et al., 1995; Halme & Huse, 1997) or individual CSR report (Gray, et al., 2001) in order to inform outside users about relevant CSR information periodically. However, separate CSR reports could be seen as superior in comparison to the voluntary CSR disclosure in the annual report since they utilize specific and comprehensive concerns to several topics. For the sake of helping enterprises to decide on what to report and how to report the CSR information in the separate report, the Global Reporting Initiatives (GRI) had issued a comprehensive guideline "GRI 4.0" (2013), which has shown its global acceptance as a standard for CSR disclosure. Since 2001, OECD has launched "Guidelines for Multinational Companies" that develop relevant principles and standards of society and environment. Additionally, in 2002 the United Nation have officially released "UN Global Compact" which proposes ten principles of CSR for the firms to meet fundamental responsibilities in the areas of human rights, labor, environment and anti-corruption. There are also other international bodies that developed frameworks in CSR such as the ISO 26000 Guidance on Social Responsibility (2010), the World Business Council for Sustainable Development Guidelines (WBCSB, 1998), and the Institute of Social and Ethical Accountability Guidelines (AA1000, 2008).

The argument of the relationship between CSR and financial performance was still undefined in the literature. Prior study clarified that between 1972 and 2002 there were totally 127 published articles empirically investigated the association between firms' socially responsible conduct and their performance (Margolis & Walsh, 2003). The previous academia depicted that the association between CSR and firm performance can be among positive, negative or irrelevant, depending on different countries, industries, regulatory pressures, or even mediators the study deployed.

Specify to China's case, the country still suffers from sweatshops and environmental pollution problems. Made-in-China products impressed worldwide by not only low price but also low product quality and irresponsible manufacturing processes. It has long been considered that the degree of economic development between western part of China and eastern part is imbalance (Su, 2013). In eastern part of China, regional governments and regulations are highly capitalized and well-funded therefore they have less pressure in boosting business advancement and more concerns on CSR practices. Oppositely, western government has been taken extensive economic development model that concern extremely on local economy and pays less attention

to CSR performance. Furthermore, compare with western residents' wealth, eastern residents have higher per capita income that would pursuit a higher quality of life. Therefore, eastern firms may receive more legitimate stresses from the public if CSR has been not well performed. Additionally, eastern authorities have been released stricter regulations of CSR practices and disclosure than that of western government, eastern firms are forces to conduct socially responsible activities and communicate to the public. In summary, the different level of economic development, regulatory intensity and culture background may bring different effects on CSR and the association between CSR and financial performance.

In this study, it aims to explore whether China's regional variance will moderate the relationship between CSR and financial performance or not. The remainder of this article will be organized as follows: in Section 2 and Section 3, it would produce the literature review and hypothesis derived from a theoretical rationale. In Section 4, it will deliver relevant data and variables, while in Section 5 it will present empirical results. The last Section 6 will bring out conclusions.

2. Literature review

Previous studies have shown conflicting consequences in terms of the association between CSR and financial performance. Some studies believed that the relationship is positive (Maignan et al., 2000; Barnett & Salomon, 2006), while some of them have shown a negative association (Wang et al., 2008; Brammer & Millington, 2008). The irrelevant relationship also exists by prior empirical findings (McWilliams & Siegal, 2000). It was affirmed that Bragdon and Marlin (1972) and Moskowitz (1972) issued the first studies, while almost half of the empirical results pointed out a positive relationship between corporate social performance and financial performance, and only seven studies indicated a negative association. There were 28 studies reported non-significant findings, while 20 studies uncovered a mixed set of findings (Margolis & Walsh, 2003).

Regarding to the positive association, Barnett and Salomon (2006) used the number of screens by Socially Responsible Investing (SRI) as the variable of CSR to test the financial-social performance link. It depicted a positive association via an empirical test on a panel of 61 SRI funds from 1972 to 2000. Shen (2007) applied CSR-financial performance test for China's listed firms which only specified to chemistry, plastic cement and petroleum industry. It found that those firms with higher profitability and assets size would yield higher quality of CSR information disclosure. Concerning on the negative relationship, Brammer and Millington (2008) explored the corporate social performance (CSP) and financial performance within corporate charitable giving. It found that time horizon become a significant factor in determining the relationship and poor social performers would do best financially in the short run while good social performers would do best over longer time horizons. Li (2006) empirically tested China's listed firms and also find the similar conclusion which designated that firms with lower CSR practice and disclosure may yield more profit in short-term, but in long-term the poor CSR will destroy firm value. In term of mixed, irrelevant or nonlinear association, McWilliams and Siegal (2000) explored

U.S firms in KLD database and find that there is no significant relationship between CSR and financial performance. Chen and Ma (2005) also empirically discovered that the quality of CSR information has nonlinear association with firms' financial performance.

Additionally, the level of CSR will also vary in different regions and countries. McWilliams et al., (2006) argued that the performance of CSR practices could be substantially different in various business norms and standards, regulatory frameworks, and stakeholder demand. Campbell (2007) also believed that it will be easier to develop relatively transparent and explicit policies of CSR information disclosure in those strictly regulatory areas, and results in a more effective and efficient supervisory mechanism of CSR fulfillment. Consequently, the stringent regulation of CSR practices will advocate managers to be more legitimate by the public and authority and perform CSR in a higher level. Qi (2013) focused on China's circumstance and pointed out that business within eastern part of China have experienced a well-developed political environment. The eastern government may play less interventions in economic development than that of western authority. Therefore, eastern companies have been held to better CSR implementation. Su (2013) interpreted that various economic level and regulatory pressures will influence the CSR level. The study referred to "Western Development" which is an exceptional domestic policy approved by central government since the year of 2000 and believed that western corporate activities are subject to policy-oriented while eastern company are exposed on a relatively free market.

As has been stated, no consensus has appeared so far to whether better CSR lead to better financial performance or not. Furthermore, prior studies debated the mediating effect of regional variance on the association between CSR and financial performance. Extend to China's market, there is huge differences in aspect of economic development and regulatory framework between eastern and western part of China that inevitably cause differences in both CSR issues and CSR-financial performance link.

3. Theoretical framework and hypothesis

Based on stakeholder theory, the effects of recognizing and administrating key stakeholders on the firm can be able to relieve the possibility of negative regulatory and legislative action. From the perspective of employees, the sound relationship poses important influence on attracting, retaining and motivating them thereby enhancing overall productivity and increasing profitability (Turban & Greening, 1997). Additionally, it can raise corporate revenue by advocating attempts to differentiate company's products or services therefore fascinating socially conscious customers (Maignan et al., 2000). It may also attract potential investment from socially responsive investors since the favorable socially firms are easily lobbying for tax break from local government (Graves & Waddock, 2000). Therefore, the better CSR the firm perform may lead to higher financial performance. According to resource-based view, CSR activities can enhance the competence of firm to reach the competitiveness of resources, which include tangible and intangible resources, that can improve

firm's technology, human capital, reputation, and finally increase its financial performance (Surroca et al., 2010). Based on legitimacy theory, top management will try best to convince public and society that the firm is socially responsible and behave legitimately in order to reach consistence between corporate activities and the values of related public (Lindblom, 1994; Gray et al., 1995; (Haniffa & Cooke, 2005).

Thus, it proposes the following hypothesis:

Hypothesis 1: CSR is positively associated with financial performance.

Currently in China, central government is implementing fiscal decentralized policy which implies that local government has more autonomy to make own political decisions. Regional authorities can develop own regulations regard to business advancement, infrastructure investment and environment protection based on local circumstances. In those areas with tighter regulatory pressures, local authority will officially issue a variety of principles and guidelines to impose corporate activities on CSR-oriented tendency. According to Maignan and Ralston (2012)'s viewpoints, the differences of regulation framework and economy level across different regions may contribute to various understanding and reaction of CSR.

Thus, it proposes the following hypothesis:

Hypothesis 2: The regional variance of corporate's western and eastern location of China will moderate the association between CSR and financial performance.

In eastern part of China, certain provincial governments have been regarded as strict regulatory regimes. In this case, companies have been always challenged by institutional pressures. When the firm actively engage in CSR issues, it may be encouraged by provincial government and be more legitimate from local authority. When the firm conduct socially irresponsible, such as manufacture unsafe products and employ child labor, it will be punished by local government. Additionally, eastern residents generally have higher level of income that inspire to pursue the quality of leisure life. They expect the company to produce high-quality goods, protect local environment well and play more efforts on local community. The CSR-oriented company may probably receive more investment by its legitimacy recognized from local government and society.

Thus, it proposes the following hypothesis:

Hypothesis 3: In eastern part of China, CSR is positively associated with financial performance.

In western part of China, a more relaxed regulatory regime exists. Even though company will be awarded if it acts socially responsible, it may experience a lower risk of punishment if company fail to perform CSR issues. Therefore, company has possibility in speculation to avoid regulatory stress by misconduct CSR activities. In addition, western residents are enthusiastic in maximizing personal wealth. In this circumstance, western company may merely pursue profit maximization and has not yet grasped the importance and potential benefit of CSR practices.

Thus, it proposes the following hypothesis:

Hypothesis 4: In western part of China, CSR is not significantly associated with financial performance.

4. Data, Measurements, and Empirical model

4.1. Data

This study is mainly based on China's listed firms in Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) in the year of 2014. It initially filters the original data by the following steps: (I) Eliminates those listed firms which have not released separate CSR reports in 2014; (II) Eliminates those listed firms which are classified as banking and insurance industry by China's Securities Regulatory Commission (CSRC) since certain CSR and information disclosure guidelines will impose on above industries. (III) Eliminates those listed firms which are classified as "Special Treatment (ST)" by CSRC since their financial positions have been deteriorated. After processing data on the basis of above criteria, the combined sample consists of 635 observations in the year of 2014.

4.2. Measurements

Measurement of Independent variable

The study employs CSR as independent variable. The CSR data is obtained from RKS China database which is one of the biggest professional and independent CSR rating system in mainland China. RKS China develop its evaluating criterion based on three dimensions as follows: Macrocosm, Technique, and Content. The spectrum of CSR performance is ranged from 0 to 100. If the firm is rated in a higher score, it has a higher-quality of CSR information disclosure.

Measurement of Dependent variable

Financial performance will be designated as dependent variables. Orlitzky et al. (2003) argued that financial performance can be measured by two subdivisions as market-based and accounting-based measures. Market-based measurement primarily reflects the market price which relies on stock-market participants' discretion of past, current and future stock return and risk. Accounting-based measurement mainly represents the past financial data that contributes to corporate internal decision-making and managerial performance rather than external market responses. In this study, it employs accounting-based measurement since China's stock market is relatively regulated-oriented. The existence of information asymmetry in stock market may destroy the accuracy of actual financial performance. Return on Assets (ROA) will be selected and it will utilize the year of 2015's data as the lag effect of financial performance based on Li (2006) and Shen (2007)'s propositions. The higher ROA the firm delivers, the better financial performance it experiences.

Measurement of Moderator Variable

The study adopts regional variance as moderator. It will divide China's listed firms into either western part or eastern parts. The categorization is based on three criterions: (I) Geographical location; (II) The level of economic development; (III) Official three economic zone by China's authority. Based on above standards, western part includes the following provinces or regions: Guizhou, Sichuan, Yunnan, Qinghai, Shanxi, Inner Mongolia, Chongqing, Xinjiang, Tibet, Gansu and Guangxi.

The rest of provinces or regions of China will be classified as eastern part.

Measurement of Control Variable

In this study, the type of ownership, the size of the firm and the age of the firm will be appointed as control variables. According to Xiao et al., (2011)'s viewpoints, state-owned companies normally perform CSR practices better than private enterprises and foreign-owned companies. Therefore, the types of ownership may play more or less influences on CSR issue. Additionally, large-size enterprises will occupy a larger proportion of market share. The firm will be benefit from scale effect that lead to better financial performance. Furthermore, the age of the firm may also affect corporate value and performance (Li, 2006).

Table 1. The definition of variables

Type of Variable	Name of Variable	Symbol	Measurements
Dependent Variable	Corporate Social Responsibility	<i>CSR</i>	The CSR score from RKS China database
Independent Variable	Financial Performance	<i>ROA</i>	Return on Assets = Net Income / Total Assets × 100%
Moderator Variable	The Location of the firm	<i>Location</i>	Western part = 1, Eastern part = 0
Control Variable	The size of the firm	<i>Asset</i>	Logarithm of total assets
	The age of the firm	<i>Age</i>	The year of empirical study – the year of corporate establishment
	The types of ownership	<i>Ownership</i>	State-owned = 1, Other = 0

4.3. Empirical model

In order to estimate the effects of CSR on financial performance, and explore how regional variance moderate the association between CSR and financial performance, this study develops following empirical model:

$$ROA_{t+1} = \beta_0 + \beta_1 CSR_t + \beta_2 Location_t + \beta_3 CSR_t \times Location_t + \beta_4 Asset_t + \beta_4 Age_t + \beta_6 Ownership_t + \varepsilon. \quad (1)$$

To further examine the differences between eastern CSR-financial performances link and western CSR-financial performance link, this study develops following empirical models:

$$\text{Eastern part of China : } ROA_{t+1} = \gamma_0 + \gamma_1 CSR_t + \gamma_2 Asset_t + \gamma_3 Age_t + \gamma_4 Ownship_t + \varepsilon. \quad (2)$$

$$\text{Western part of China : } ROA_{t+1} = \delta_0 + \delta_1 CSR_t + \delta_2 Asset_t + \delta_3 Age_t + \delta_4 Ownship_t + \varepsilon. \quad (3)$$

Where γ_0 , δ_0 are intercepts, γ , δ are standardized regression coefficient, t is the

year, ε is the residual.

5. Empirical results

5.1. Results of descriptive statistics

The table 2 depicts the result of descriptive statistics. It represents that in the year of 2014 the mean of CSR score for China's listed firms is 39.3308, which implies that generally the performance of CSR in mainland China is relatively low. The mean of ROA is 0.0327, which similarly matches the overall means of ROA for all China's listed firms. It also implies that the sample of this study selected is representative to a certain extent. The mean of location is 0.12, which implies that western enterprises account for 12 percent of total number of enterprises. The means of ownership is 0.61, which presents that there were three-fifths enterprises are state-owned.

Table 2. Results of descriptive statistics

Symbol of Variable	Sample Size	Min.	Max.	Mean	Standard Deviation
<i>ROA</i>	635	-3.77108	0.598147	0.03272860	0.06634262
<i>CSR</i>	635	19.701890	87.947754	39.3308092	10.8642632
<i>Location</i>	635	0	1	0.12	0.325
<i>Asset</i>	635	20.134672	28.508728	23.0756725	1.13911295
<i>Age</i>	635	5	35	18.24	4.652
<i>Ownership</i>	635	0	1	0.61	0.487

5.2. Results of hierarchical regression analysis

In order to examine the effects of CSR on financial performance, this study develops the hierarchical regression model. It establishes three blocks for the model (1). The first block may examine the effects of control variable, after that the it will add independent variable into the second block. Compared with first and second block, the three block will add the interacting effects between continuous independent variable and dummy moderator variables. In order to effectively reduce the multicollinearity, it conducts centering process for both independent variable and moderator variable.

The regression results are shown on table 3. The F value of first block, second block and third block is 6.793, 6.474 and 6.397, respectively. It implies that overall hierarchical regression model is statistically significant. In the first block, the ownership has dramatically negative effect on financial performance, which means that the ROA of state-owned enterprises in China is relatively lower than other kinds of companies such as private and foreign-owned. In the second block, CSR is positively associated with financial performance, which is consistent with hypothesis 1. It emphatically verifies that if the firm has better CSR practices and information disclosure, it may experience better financial performance. In the third block,

the interacting coefficient between CSR and location is significant, which illustrates that the regional variance may moderate the association between CSR and financial performance, which is also consistent with hypothesis 2.

Table 3. Results of hierarchical regression model

Type of Variable	Symbol of Variable	First Block	Second Block	Third Block
Control Variable	<i>Asset</i>	-0.057	-0.101*	-0.103*
	<i>Age</i>	0.003	0.008	0.009
	<i>Ownership</i>	-0.149***	-0.150***	-0.136**
Independent Variable	<i>CSR</i>		0.101*	0.104*
Interaction	<i>CSR</i> × <i>Location</i>			-0.096*
	R ²	0.177	0.199	0.220
	F-statistic	6.793***	6.474***	6.397***

* indicates level of significance at 5%

** indicates level of significance at 1%

*** indicates level of significance at 0.1%

5.3. Results of group-level regression analysis

To further explore the effects of moderator on CSR-financial performance relationship, it develops group-level regressions between eastern enterprises and western enterprises, in order to examine whether the location of the firm is one of the moderator that cause the difference in the association between CSR and financial performance or not.

Table 4. Results of group-level regression model between eastern and western

Symbol of Variable	Model (2) (Eastern China)		Model (3) (Western China)	
Asset	-0.057	-0.105*	-0.115	-0.146
Age	-0.015	-0.010	0.179	0.187
Ownership	-0.130	-0.134**	-0.206	-0.205
CSR		0.106*		0.141
R ²	0.161	0.187	0.104	0.110
F-statistic	4.929**	4.998**	3.4103*	3.7128*

* indicates level of significance at 5%

** indicates level of significance at 1%

*** indicates level of significance at 0.1%

Table 4 displays the regression result of model (2) and model (3), and shows that two regressions are statistically significant. Model (2) presents a significantly positive association between CSR and financial performance, which is consistent with hypothesis 3. It approves that in eastern part of China, the higher quality of CSR the enterprise deliver, the better financial performance the company may

reach. Model (3) also implies a positive relationship between CSR and financial performance, but the result is not statistically significant, which is also consistent with hypothesis 4. It verifies that in western part of China, CSR is not significantly associated with financial performance.

5.4. Collinearity test and robustness test

The study employs collinearity test in order to ascertain whether multicollinearity is existing across models. The Durbin-Watson statistics for model (1), model (2) and model (3) is 2.004, 2.001 and 1.968, respectively, which approach to 2. All residuals have no autocorrelation. Furthermore, Variance Inflation Factor (VIF) across all models are less than 3, which also certifies that there is no serious multicollinearity incurred.

The study also develops robustness test by substituting alternative dependent variables into the model. Based on prior academia, some scholars have been adopted Return on Equity (ROE), total sales and Earnings per Share (EPS) as accounting-based measurements in evaluating corporate financial position. Since current total sales may intensely reflect current operation, while current CSR may immediately either simulate or restrain current customers' consumption, it applies total sales in the year of 2014 to replace ROA as the dependent variable within robustness test. The empirical results show that model (1), model (2) and model (3) are still statistically significant. In addition, the examination of models remains consensus on the hypothesis from 1 to 4.

6. Conclusions

The primary purpose of this study is to empirically examine the association between CSR and financial performance for China's listed firms. It investigates such relationship using a sample of 635 firms in the year of 2014, and explores the moderating effects of regional variance on the relationship of CSR-financial performance.

The first key finding of this paper concerns the association between CSR and financial performance. It finds that if the enterprise has commitment to social responsibility and acts responsibly, its financial performance would improve to some extent. The possible reason is illustrated as follows: initially, the fulfillment of CSR issues can maintain favorable relationship with stakeholders including shareholders, investors, employees, government, suppliers, and society. For instances, CSR practices can enhance employees' self-identity degree therefore can be a great way of keeping employees motivated. Corporate's socially responsible activities may also attract more CSR-oriented investment thus increase corporate value. Furthermore, CSR practices is able to achieve more resources, specifically intangible resources such as reputation, techniques, that increase company's competitiveness and increase financial performance as a whole. Ultimately, enterprises can be legitimate from regulatory authorities and public through their CSR practices which are conformed to social and governmental expectations that probably strengthen corporate image and produce positive influences on financial performance.

The second key finding is that the regional variance the firm located affects the relationship between CSR and financial performance. The huge difference of economic developments between western and eastern part of China may moderate the association to some extent. Additionally, the discrepancies of philosophy of management and the severity of regulation in term of social and environmental issues across regions and provinces may also moderate the link of CSR-financial performance.

The third key finding is that in eastern part of China, CSR is positively associated with financial performance, while in western part, CSR is not significantly associated with financial performance. Compared with western China, eastern China was vulnerable by economic globalization. Eastern enterprises may not only concern corporate profitability and market share, but also pay more attention to CSR which had been advocated globally. In addition, eastern residents have started to focus more on environmental protection, products safety and community contribution. In order to meet social expectations, eastern firms may desire to engage more in CSR issues. Moreover, eastern provincial authorities have released more stricter CSR-oriented regulations and requires local firms to perform actively. On the other hand, western regimes are more profit-oriented and pose less regulatory pressures on socially responsible activities than eastern regimes. Therefore, western enterprises receive less stresses of CSR issues that corporates' motivation to be act socially responsible is absent across western regions and provinces of China.

It also purposes improved suggestions for both enterprises and government. Recently, China's companies still may not be aware of the potential benefits of CSR practices. Top managers have not clearly developed strategic CSR planning and effective CSR controlling. It is critical for corporate decision-maker to recognize that CSR could assist company with establishing good image and socially admitted reputation, which could help company to gain advantages in market competition, and finally be illustrated by enhancement of corporate financial performance. Hence, CSR issues and sustainability should be emphasized by governance of enterprises. From the perspective of government, relevant authorities may further regulate companies to be CSR-oriented and release principles and policies in term of CSR practices and its information disclosure. One of effective mechanisms is that authority could highlight certain top CSR enterprises for benchmarking. Specifically, western governments of China still need a stronger commitment of CSR to ensure that western enterprises would not only seek for profit maximization, but also play close attention to environment protection and development of local community. Western government could implement some preferential policies in advocating CSR practices, such as tax-deductible of charitable donations and subsidy offered to corporates' contribution to local community.

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