

Research Article

Research on the Impact of CSR on Firm Performance: An Empirical Analysis Based on Food and Beverage Industry in China

¹Song Jiang, ^{1,2}Qiang Fu and ¹Xing Liu

¹School of Economics and Business Administration, Chongqing University, Chongqing, 400030,

²School of Statistics, Lanzhou University of Finance and Economics, Lanzhou, 730020, China

Abstract: Based on the stakeholder and reputation theory, we investigate the relationship between CSR and firm performance, using a sample of 56 listed companies from food and beverage industry in China (2009-2014). The results show that the good performance of corporate social responsibility can have a positive impact on financial performance and corporate value, so corporate social responsibility will increase corporate performance. For food enterprises, it is very important to assume the social responsibility of their own. Therefore, the government and the society need to strengthen the food industry enterprises to actively understand the social responsibility and guide them to assume social responsibility initiatively.

Keywords: Corporate social responsibility, corporate value, firm financial performance, food and beverage industry

INTRODUCTION

Since the 1990s, corporate social responsibility has received the widespread attention of the society. Food companies, in particular, are related to the safety of people's life. But in recent years, food safety incidents repeatedly occur in China, even some good reputation of the leading companies involved, which caused a heavy blow to the image of the industry. A serious lack of corporate social responsibility makes frequent outbreaks of safety issues of product quality of food industry, which caused a bad influence on people's healthy life and hindered the company's future sustainable development at the same time.

In addition, in the context of economic globalization, the competition among enterprises is not limited to the cost, quality, brand, but rose to strategic level of corporate social responsibility, business goodwill. Because few companies ignore their social responsibility and cannot successfully enter the international market, brought huge losses to their own investors, the public and other stakeholders. In recent years, the construction of corporate social responsibility has gradually taken seriously in China. Therefore, we use 56 listed companies of the food and beverage industry as samples to explore the relationship between CSR and financial performance and corporate value, in order to strengthen the positive understanding and bearing of social responsibility in the food industry.

LITERATURE REVIEW

Corporate Social Responsibility (CSR): During recent decades, researchers have paid considerable attention to CSR. Therefore, it has become a prominent concept in the management literature. Despite the extensive literature on CSR, there is still no unified and precise definition. In a well-known definition of CSR by Carroll (1979), CSR is the social responsibility of a company that includes the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time. This study considers the economic and ethical dimensions of CSR as presented by Carroll (1979).

The social responsibility of food and beverage companies is to ensure food quality and safety and promote their sustainable development as the basic requirements. They should to comply with food safety laws and regulations and standards initiatively and establish and strengthen the faith on the social responsibility. And then, they need to put consumer interests as the core, while taking into account the interests of other stakeholders, to establish a sense of social responsibility of corporate image (Cao *et al.*, 2012).

CSR sprouted in the late 1800s and corporate social responsibility theory and stakeholder theory is gradually moving toward integration in the 1990s. Carroll (1991) is the first to study the stakeholder theory and divides it into direct stakeholders and indirect stakeholders according to the formality of the relationship between stakeholders and the company.

Corresponding Author: Qiang Fu, School of Economics and Business Administration, Chongqing University, Chongqing, 400030, China

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The direct stakeholders include shareholders, creditors, suppliers, employees, consumers, etc. and the indirect stakeholders are government, social activities groups, media, the general public, etc. In this study, we divide corporate social responsibility into the responsibility for the shareholders, creditors, government, employee, suppliers and consumers.

CSR and firm performance: Recognition of the relationship between CSR and firm performance has garnered much interest among authors recently. Many studies attempted to find a global link between CSR and firm performance. A large number of empirical literature research conclusions indicate that there are positive correlation, negative correlation or no significant correlation between the both. For example, empirical findings by some researchers (e.g., Galbreath and Shum, 2012; Luo and Bhattacharya, 2006; Margolis *et al.*, 2008; Shen and Chang, 2008) showed a positive association between CSR and firm performance. This conclusion was confirmed by researchers based on different countries' samples, such as Rettab *et al.* (2009) on UAE, Lin *et al.* (2009) on Taiwan, Galbreath and Galvin (2008) on Australian firms and Alafi and Hasoneh (2012) on Jordan. Consistent with previous studies, after examining 34 previews studies on CSR and firm performance linkage by Van Beurden and Gössling (2008), it was found that 68% of studies demonstrated a positive association.

Others suggested a negative (Vance, 1975) or no correlation (Aupperle *et al.*, 1985; Crisóstomo *et al.*, 2011).

RESEARCH DESIGN

Sample selection and data collection: We select the sample from listed companies of the food and beverage industry on Shanghai and Shenzhen A-share market. Sample selection process excluded companies with missing variables or outliers and specially treated companies. Finally, we obtain a balanced panel data set of 59 listed companies from 2009 to 2014. The data using in this study mainly come from the WIND

database or GTA database. Specifically, the data of corporate social responsibility come from The CSMAR Database developed by GTA and the financial data come from The WIND database. We used Excel 2013 and Stata 14 program to do Data analysis.

Variable definitions: Dependent variable, this explanatory variable in this study is firm performance, which usually has two ways to measure, that is, accounting or market indicators. Accounting indicators measuring corporate performance include Return on Assets (ROA) and Return on net Assets (ROE), the weakness of which is vulnerable to manipulation and the influence of different accounting methods. Market indicators measuring corporate performance mainly select the Tobin Q, which is based on the stock price index, therefore easy to be subject to irrational price fluctuation of the company. In this study, we select ROE and TQ as the measurement of financial performance and corporate value respectively (Table 1).

Independent variables: Wood and Jones (1995) believe that stakeholder theory is most closely related to corporate social responsibility theory. Based on this theory, we plan to construct the evaluation system of the CSR of listed corporations in the food industry from six aspects: the shareholders, creditors, consumers, suppliers, employees and the government:

Responsibility to shareholders: Shareholders are the main investors in the enterprise, who are most concerned about the value increasing ability of invested capital. Whereby we select earnings per share to measure corporate social responsibility to shareholders.

Responsibility to creditors: Corporate Responsibility to creditors are mainly scheduled principal and interest payments, creditors are most concerned about the solvency of enterprises. Thus we select asset-liability ratio to measure corporate responsibility to creditors.

Table 1: Variable definitions

	Name	Proxies	Variable	Calculation
Corporate performance	Financial performance	ROE	Y1	Net profit/equity
	Corporate value	Tobin Q	Y2	Market value/replacement cost
Corporate social responsibility	Responsibility to shareholders	EPS	X1	Net profit/final total equity
	Responsibility to creditors	Leverage	X2	Liability/asset
	Responsibility to consumers	Major business cost rate	X3	Major business cost/main business income
	Responsibility to suppliers	Turnover of payable	X4	Operating cost/average in accounts payable
	Responsibility to employees	Proportion of employee wages and benefits	X5	Cash payments to employees and for employees paid/net profit
	Responsibility to the government	Pay tax rate	X6	Total income tax/total profit
Control variables	Nature of company	Is a State-owned enterprise	State	State-owned is 1, 0 otherwise
	Company size	Total assets	Lnsiz	The natural logarithm of the final total assets
	Firm age	Listage	Listage	Number of years

Responsibility to consumers: Social responsibility of food enterprises to consumers is to guarantee the safety and quality of food, to provide cheap products and to recall for the products in question timely. The cost rate of main business income reflects the degree of deprivation of the interests of consumers, the higher of the rates indicates that the enterprise take care of the interests of its clients.

Responsibility to suppliers: Supplier is one of the important stakeholders of the enterprise, they are most concerned about the timely payment of the purchase of the enterprise. Thus, we select the turnover rate of payable to measure corporate social responsibility to suppliers.

Responsibility to employees: Employees concerned about the wages and benefits. So, we measure corporate social responsibility to employees from wage and benefits.

Responsibility to the government: Corporate responsibility to the government is to comply with the relevant policies and regulations and pay taxes on schedule in accordance with the law. Thus, we select the tax pay rate to measure corporate social responsibility to the government.

Control variables: Taking into account the nature of company, company size and firm age influencing on the relationship between corporate social responsibility and corporate performance, this study will introduce them as control variables.

Model construction: According to the above design, we can build multiple regression models below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 State + \beta_8 Lnsz + \beta_9 Listage + \xi$$

where, Y represents Y_1 and Y_2 , which represents ROE and Tobin Q respectively, X represents a series of corporate social responsibility variables, β_i represent regression coefficients, ξ represents Residuals.

EMPIRICAL RESULTS AND DISCUSSION

Descriptive statistics: Table 2 provides descriptive statistics for the main variables of the sample. To avoid the influence of outliers, all of the continuous variables are winsorized at the 1% and 99% levels. As shown in Table 2, the average company in the sample has a listed age of 10.43, leverage of 51.35%, ROE of 11.29%, Tobin Q of 2.5848 and Lnsz of 21.7736. According to descriptive analysis, we can see little difference in the size of the food company, which enhances the comparability between sample companies. 43.57% of the sample food companies are state-owned enterprises.

Multiple regression analysis: Table 3 reports the estimates of the effect of CSR on firm performance. The results show that the coefficients of earnings per share, income tax rate and turnover ratio of payable are significantly positive when selects ROE as a the measurement of corporate performance, which indicates that corporate social responsibility to shareholders, the government and suppliers can enhance the profitability. However, the proportion of employee wages and benefits has a significantly negative impact on ROE, which indicates that corporate social responsibility to employees reduces the company's profitability. In

Table 2: Descriptive statistics of the sample

Variable	Mean	SD	Min.	Median	Max.
Y1	0.11290	0.0935	0.0075	0.1015	0.38540
Y2	2.58480	1.98530	0.5843	2.3784	7.88350
X1	1.17520	2.05430	0.0584	1.0546	13.2543
X2	0.51350	0.17830	0.1033	0.5283	0.79550
X3	0.65840	0.19830	0.0098	0.6705	1.29860
X4	11.9876	10.8746	1.8769	7.9857	59.7648
X5	0.09840	0.03360	0.0106	0.0978	0.25890
X6	0.14690	0.16780	-0.3518	0.2058	0.37890
State	0.43570	0.34280	0.00000	0.0000	1.00000
Lnsz	21.7736	1.04650	19.5987	21.6875	24.9532
Listage	10.4300	4.14000	1.00000	10	22.0000

Table 3: Estimating the effect of CSR on firm performance

Variable	ROE			Tobin Q		
	B	t	Sig.	B	t	Sig.
Constant	-0.0358	-3.378	0.000***	0.487	0.845	0.783
X1	0.154	5.834	0.000***	3.289	3.265	0.0095***
X2	-0.247	-0.618	0.378	-1.486	-1.386	0.145
X3	-0.359	-1.684	0.078*	0.184	0.587	0.589
X4	0.496	1.864	0.058*	4.693	3.264	0.0032***
X5	-2.540	-1.983	0.046**	-2.533	-1.802	0.065*
X6	0.483	3.478	0.0098***	4.837	4.323	0.0065***
State	-0.014	-0.689	0.479	-0.973	-1.628	0.086*
Lnsz	0.027	0.106	0.917	-1.387	-1.230	0.287
Listage	0.034	1.328	0.137	-0.865	0.478	0.784
N	56			56		
R-squared	0.38580			0.22560		
Adjusted R-squared	0.31760			0.18930		
S.E. of regression	9.34840			1.68950		
Prob (F-statistic)	0.00013			0.00532		

addition, the coefficients of asset-liability ratio were not significant, indicating a no significant impact of corporate social responsibility to creditor's impact on the company's profitability. When using Tobin Q as a measure of corporate performance, we can come to a similar conclusion. Control variables in both regressions are not insignificant in most cases, indicating that the nature, age and size of a company are not the main factors affecting the company's performance.

CONCLUSION

Based on a sample of 56 listed firms of the food and beverage industry in China from 2009 to 2014, we investigate the effects of corporate social responsibility on financial performance and corporate value. The results show that a significant positive correlation between a high level of corporate social responsibility and corporate performance as a whole. Specifically, corporate social responsibility to shareholders, the government and suppliers can enhance the profitability, while corporate social responsibility to employees reduces the profitability. There is a no significant impact of corporate social responsibility to creditors on the company's profitability. The results are robust when we select Tobin Q as a measure of corporate performance. Therefore, the government and the society need to strengthen the food industry enterprises to actively understand the social responsibility and guide them to assume social responsibility initiatively.

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