CEO COMPENSATION, CORPORATE SOCIAL RESPONSIBILITY (CSR) AND FIRM PERFORMANCE: EVIDENCE FROM CHINA

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ABSTRACT

This paper investigated the moderating effect of Corporate Social Responsibility (CSR) on the relationship between CEO compensation and firm performance on the Chinese capital market. This paper applied a panel data regression technique using data composition represented by SSE180 index for a period spanning from 2010 until 2019. A total of 86 representative large listed firms was employed in this paper for the period of 10 years with a total of 860 firm-year observation. The empirical results showed that both CEO compensation and CSR have a significant positive relationship with firm performance. More importantly, this paper found that the level of CSR moderates (reduces) the relationship between CEO compensation and firm performance. Therefore, the results implied that although CSR is a useful business strategy, it still has a lot of room for improvement.

Keywords: CEO compensation, CSR, Firm performance, China, Panel data regression.

1.0   INTRODUCTION

In 21st century, complex and changeable market environment has forced firms to face challenges and even cruel market competition. Hence, continuous stable performance is a key driver of a firm especially in dealing with the increasing challenges posed by the unforeseen event in dynamic business landscape. Only through performance can a firm have opportunity to achieve sustainable development and make rapid progress, so most firms are trying to find any possible ways to improve their performance (Taouab, 2019). Under this situation, the controversial topic of CEO compensation has attracted ever-increasing attention (Jiang and Zhang, 2018). The theoretical agency study conducted by (Jensen and Meckling, 1976) also domenstrated the importance of aligning CEO compensation with firm performance.

The agency theory literature regards CEO compensation as a market mechanism, which prevents executives from over-extracting rent by aligning management decisions with the interests of shareholders. The conflict of interest between managers and shareholders can be effectively alleviated through the payment of executive compensation in performance-sensitive ways such as equity, stock options and bonuses (Jiang and Zhang, 2018). Therefore, in order to obtain high incentives, the actions of executives are supposed to be in the best interests of shareholders and thus improve firm performance.

However, unlike some developed countries, where more mature external capital markets and strict implicit compensation contracts could effectively motivate and restrain the actions of managers, CEO compensation structure in China is single and cash compensation is still dominant. That indicates the CEO compensation incentive mechanism in China is not perfect and lacks effective executive restraint mechanism. Therefore, it is meaningful to investigate their relationship based on Chinese unique environment.

More importantly, combined the in-depth development of economic globalization with the Chinese rapid economic development, people's awareness of social responsibility is gradually enhanced. Corporate Social Responsibility (CSR) that originated from the West, has attracted great attention in China. An important reason why CSR has attracted much attention is that the commercial value it brings is increasingly reflected. Many studies showed that CSR, as a useful business strategy, could increase the satisfaction of all stakeholders, strengthen firm brand image, improve firm reputation and promote firm innovation. However, the role of CSR as moderator in the relationship between CEO compensation and firm performance has rarely been studied. In order to fill this research gap, this paper will examine their relationship under the moderating role of CSR based on Chinese listed firms.

2.0   LITERATURE REVIEW

The CEO Compensation refers to the financial payment and other non-monetary rewards given to the Chief Executive Officer in exchange for their services to the organization. Empirical studies in terms of the relationship between CEO compensation and firm performance have generally shown mixed results (Elsayed and Elbardan, 2018). A majority of the studies found CEO compensation is positively correlated with firm performance (Elsayed and Elbardan, 2018 in China; Jiang and Zhang, 2018 in China; Kato and Kubo, 2006 in Japan; Ozkan, 2011 in UK; Sigler, 2011 in US). Particularly, the empirical results by Ozkan (2011) implied that CEO cash compensation is significantly and positively correlated with firm performance while the correlation of CEO total compensation is not significant. However, others (Conyon and Peck, 1998; Elsilä, Kallunki, Nilsson, and Sahlström, 2013) found their relationship was weak or not related at all when other interrelated indicators such as firm size, ownership as well as other governance mechanisms were taken into account. The previous literature on CEO compensation using Chinese data usually show their positive relationship (Jiang and Zhang, 2018).

In this paper, CSR is a broad concept, which refers to the responsibility that firms need undertake for its impact on society (Cheng, Lin, and Wong, 2016). Empirically, the association between CSR and firm performance has been studied by many scholars. In generally, the literatures on the effect of CSR disclosure on the firm performance showed that there is a positive relationship (Malik, 2015). Many studies revealed that companies actively engaged CSR activities certainly can improve firm performance (Chen and Wang, 2011; Cheng et al., 2016; Famiyeh, 2017; Feng, Wang, and Kreuze, 2017). Studies by El Ghoul, Guedhami, Kwok, and Mishra (2011) and Yeh, Lin, Wang, and Wu (2019) showed that CSR activities may increase the satisfaction of all stakeholders, enhance the company brand image, and even increase firm performance and lower the cost of capital. While Nelling and Webb (2009) found that the association of CSR with firm performance is not significant. Brammer, Brooks, and Pavelin (2006) found out that CSR would have negative effect on firm performance.

From what has been studied above, both CEO compensation and CSR are correlated with firm performance. It would be reasonable to assume that the CSR could moderate (reduce or increase) the relationship between CEO compensation and firm performance. Therefore, this paper proposes the following hypothesis:

H1: CSR can moderate the relationship between CEO compensation and firm performance in Chinese listed firms.

3.0   RESEARCH METHODOLOGY

In this paper, all financial data are collected and gathered from China Stock Market & Accounting Research Database (CSMAR) and annual reports (for missing data). CSR disclosure is collected from hexun.com, which provide a professional evaluation system of CSR disclosure of listed firms. In order to examine their relationship, this paper employed stock data represented by the aggregate composition of the Shanghai Stock Exchange 180 Index (SSE 180 index) based on the Chinese capital market spanning from 2010 to 2019. However, since we required our sample firms to have data available for all identified provisions, the sample excluded companies in the finance industry and companies with unavailable information, indeterminable data or incomplete financial data. In addition, this study retrieved the firm-year data from 2010-2019 and the final total number of observations are 86 firms, therefore the firm-year observations are 860.

Given that our data set is balanced panel data of different numbers of firms (86 firms) over a 10-year period from 2010-2019, this study applied panel data regression techniques to test the relationship among CEO compensation, CSR and firm performance. In order to test our hypotheses, the random effect model is employed. The econometric model is specified as follows:

$$FP_{it} = \alpha_0 + \beta_1 CC_{it} + \beta_2 CSR_{it} + \beta_3 CC_{it} * CSR_{it} + \beta_4 BS_{it} + \beta_5 BI_{it} + \beta_6 CD_{it} + \beta_7 SO_{it} + \beta_8 DEBT_{it} + \beta_9 FS_{it} + Year\ dummy_{it} + Industry\ dummy_{it} + \mu_i + \varepsilon_{it} \ (i = 1,\ldots,N;\ t=1,\ldots T)$$

Where,   represents ROA to measure firm performance for firm i at time t. In this paper, ROA is defined as the ratio of consolidated net earnings to average assets.

In this paper, the key independent variables include CEO compensation (CC), CSR and their interactive term CC*CSR. If the coefficient of the interaction term is significant, indicating that CSR could moderate their relationship.   represents the natural log of the total compensation of TOP3 executives, excluding allowance received by executives. CSR is a moderator variable, measured by the rating scores of A-shares listed firms' CSR reports provided by http://www.hexun.com/. The higher CSR score, the higher quality of CSR disclosure. The maximum score is 100.

Moreover, this study used several control variables that might have an impact on firm performance, which are Board Size (BS), Board Independence (BI), CEO duality (CD), State Ownership (SO), Debt (DEBT). Board Size (BS) is measured as the total number of directors on the board. Board Independence (BI) is calculated as the ratio of the number of independent directors divided by the total number of directors on the board. CEO duality (CD) is a dummy variable, which equals 1 if the CEO is also the chairman of the board of directors, and 0 otherwise (Kao, Hodgkinson, and Jaafar, 2019). State ownership (SO) is calculated as the ratio number of state-owned shares divided by the total number of shares (Hu, Tam, and Tan, 2010). Debt (DEBT) is the ratio of debt and equity financing, which is obtained by dividing total debt by total asset. In addition to that, this paper added industry

dummy variables to control for industrial effects as well as year dummy variables in the model to capture the regulation effect, which may affect the outcome variable.

4.0   EMPIRICAL ANALYSIS

4.1   Descriptive statistics and correlation

Table1 shows the main descriptive statistics of the research variables used in this study for the full sample. Firm performance (ROA) ranges from the minimum of -11.96350 to the maximum of 47.7017 with an average value of 6.988960, indicating that there are big differences among these sample firms and some firms have poor performance. The average value of CEO compensation (CC)is 14.8625, the minimum value is 11.8241, and the maximum value is 17.7457. In terms of CSR, as shown in the table, the quality of CSR disclosure varies widely (the score of CSR disclosure ranges from -13.88 to 85.77).

With respect to the control variables, the average number of members serving on the board (Board Size) is 9.55, ranging from 9 to 17. The percentage of independent directors (Board Independence) has a mean of 38.85% and a median of 36.36%, which meets China's rules on board composition of listed firms (as of 2003 one-third of the members of the board must be independent). While still a few sample firms do not have enough independent directors on their boards (the minimum is 12.5%). About 12.44% of the sample firm CEOs and chairman are the same person. The mean value of the proportion of state-owned shares (SO) is 0.0545, the minimum value is 0.000, and the maximum value is 0.7682, which indicates the proportion of state-owned shares in most enterprises is not high. In addition, the mean of debt is 0.5127, indicating that the average DEBT ratio is 51.27%. The mean value of enterprise size (FS) is 24.3930, the minimum value is 19.7325 and the maximum value is 28.6364, indicating that there is a certain gap in the size of different firms.

Table 2 provides the correlation matrix with t-statistics among all key variables in the regression analysis. The correlation coefficients between all independent variables are small (with a maximum of 0.609021), implying that there is no multicollinearity problem. According to the study of (Shao, 2019), a correlation of absolute value 0.7 or higher may indicate a multicollinearity problem, which serves as a preliminary test for multicollinearity. Therefore, the regression models used to test the hypotheses are relatively free from multicollinearity problem.

Table 1: The main descriptive statistics of variables

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
ROA (%)	6.988960	5.676250	47.70170	-11.96350	6.126738
ln CC	14.86254	14.79305	17.74573	11.82408	0.766422
CSR	37.46731	28.94000	85.77000	-13.88000	20.84605
BS	9.548837	9.000000	17.000000	5.000000	1.907936
BI	0.388503	0.363636	0.800000	0.125000	0.078162
CD	0.126744	0.000000	1.000000	0.000000	0.330251
SO	0.054486	0.000000	0.768198	0.000000	0.140589
DEBT	0.512741	0.516892	0.885872	6.17E-05	0.184164
ln FS	24.39303	24.33377	28.63642	19.73252	1.689056
Observations	860				

Table 2: The correlation matrix with Probability

Correlation (Probability)	1 ROA	2 BS	3 BI	4 CD	5 SO	6 CC	7 DEBT	8 FS
1 ROA	1.000000							
2 BS	0.010728 (0.7534)	1.000000						
3 BI	-0.147808 *** (0.0000)	-0.369941 *** (0.0000)	1.000000					
4 CD	0.098180 *** (0.0040)	-0.115890 *** (0.0007)	0.007211 (0.8328)	1.000000				
5 SO	-0.023147 (0.4978)	0.094908 *** (0.0053)	0.057043 * (0.0946)	-0.081987 ** (0.0162)	1.000000			
6 CC	0.185812 *** (0.0000)	0.056916 * (0.0953)	-0.026309 (0.4410)	0.100659 *** (0.0031)	-0.161615 *** (0.0000)	1.000000		
7 DEBT	-0.609021 *** (-17.41767)	0.033704 (0.3235)	0.211614 *** (0.0000)	-0.051474 (0.1315)	0.040022 (0.2410)	0.003137 (0.9268)	1.000000	
8 FS	-0.248335 *** (0.0000)	0.119966 *** (0.0004)	0.235390 *** (0.0000)	-0.142176 *** (0.0000)	0.047086 (0.1677)	0.243358 *** (0.0000)	0.442456 *** (0.0000)	1.000000

***, **, * Statistically significant at 1, 5, 10 percent significance level

4.2   Regression Results

After the Hausman-test, the results (p=1.0000) show that the Random-effect model is more suitable for our data set. More importantly, in order to avoid endogeneity problems in the model, we conducted the Hausman test to examine whether there are endogenous variables in the model. The result of Hausman test statistic value strongly accepted the null hypothesis that all instrumental variables are exogenous. In addition, in order to further confirm the model in our study was valid, the return on equity (ROE) is used to replace the ROA mentioned above as the dependent variable to measure firm performance for the robustness test. It is consistent with the regression results and the conclusion that the model is robust. The specific results are shown in the Table 3.

According to Table 3, the results showed that the regression coefficient of CEO compensation (CC) is significantly and positively related to firm performance. CSR is positively correlated to firm performance. The regression coefficient of the interaction term (CC×CSR) is negatively related to firm performance at the significance level of 10 percent, indicating that CSR could significantly weakened the positive relationship between CEO compensation and firm performance. In addition, board size (BS), CEO duality (CD) as well as firm size (FS) are related to firm performance. Debt (DEBT) has a negative relationship with firm performance.

Table 3: Regression Results

Variables	Random Effect Model DV: ROA	Random Effect Model DV: ROE
CC	1.9888 *** (0.0000)	5.5123 *** (0.0000)
CSR	0.3007 ** (0.0401)	1.2684 *** (0.0001)
CC*CSR	-0.0177 * (0.0740)	-0.0784 *** (0.0002)
BS	0.2508 ** (0.0247)	0.4772 ** (0.0412)
BI	-1.7897 (0.5165)	-5.2645 (0.3622)
CD	0.9630 * (0.0641)	2.5196 ** (0.0217)
SO	-0.0951 (0.9321)	1.7104 (0.4722)
DEBT	-20.1087 *** (0.0000)	-14.1522 *** (0.0000)
FS	0.6771 *** (0.0041)	1.0514 ** (0.0248)
Constant term	-28.2303 *** (0.0001)	-85.1138 *** (0.0000)
Industry	YES	
Year	YES	
N	860	
Hausman-test for model selection	P=1.0000	
Hausman-test for endogeneity	P=0.2031	
R-squared	0.3233	O.2177
F-statistics	15.3095	8.9135
Prob (F-statistics)	0.0000	0.0000
***, **, * Statistically significant at 1, 5, 10 percent significance level		

5.0 DISCUSSION AND CONCLUSION

This paper investigated the moderating role of CSR in the relationship between CEO compensation and firm performance using stock data to represent the aggregate composition of SSE 180 index based on Chinese capital market. The findings of this paper can be concluded as follows.

The results showed that CEO compensation can indeed improve firm performance. In order to obtain high incentives, CEOs are supposed to make their best efforts in the best interests of shareholders, which is beneficial to the improvement of firm performance. However, the system of CEO compensation in China still can be improved. In China, the CEO compensation structure is single and cash compensation is still dominant, which indicates that the CEO compensation incentive mechanism in China is not perfect and lacks effective executive restraint mechanism. Therefore, China should establish a perfect professional manager market and implement effective incentive and restraint mechanism of executive compensation for the long-term development of enterprises. If the executives can maximize the interests of enterprises while pursuing their own interests, so as to give full play to the positive role of CEO compensation on firm performance.

More importantly, the results showed that there is a significant and positive relationship between CSR and firm performance, implying that CSR can be used a useful strategy. However, CSR, as a role of moderator, reduced the positive relationship between CEO compensation and firm performance instead of strengthening their relationship. An important reason for the results might be that the current Chinese firms is at a stage of eager for quick success and quick profits with the rapid development of China's economy. China's relevant laws, regulations and policies are not sound enough to encourage and constrain CSR. Although the number of CSR disclosure is increasing, the quality of CSR is low and many firms publish information that lacks third-party certification. Therefore, the results implied that although CSR is a useful business strategy, it still has a lot of room for improvement.

REFERENCES

Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. Financial Management, 35(3): 97–116.

Chen, H., & Wang, X. (2011). Corporate social responsibility and corporate financial performance in China: An empirical research from Chinese firms. Corporate Governance, 11(4): 361–370.

Cheng, S., Lin, K. Z., & Wong, W. (2016). Corporate social responsibility reporting and firm performance: evidence from China. Journal of Management and Governance, 20(3): 503–523.

Conyon, M. J., & Peck, S. I. (1998). Board Control , Remuneration Committees , and Top Management Compensation Authors (s): Martin J . Conyon and Simon I . Peck Source : The Academy of Management Journal , Vol . 41 , No . 2 , Special Research Forum on Managerial Compensation and Firm Perfo. Academy of Management Journal, 41(2): 146–157.

El Ghoul, S., Guedhami, O., Kwok, C. C. Y., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? Journal of Banking and Finance, 35(9): 2388–2406.

Elsayed, N., & Elbardan, H. (2018). Investigating the associations between executive compensation and firm performance: Agency theory or tournament theory. Journal of Applied Accounting Research, 19(2): 245–270.

Elsilä, A., Kallunki, J. P., Nilsson, H., & Sahlström, P. (2013). CEO Personal Wealth, Equity Incentives and Firm Performance. Corporate Governance: An International Review, 21(1): 26–41.

Famiyeh, S. (2017). Corporate social responsibility and firm's performance: Empirical evidence. Social Responsibility Journal, 13(2): 390–406.

Feng, M., Wang, X., & Kreuze, J. G. (2017). Corporate social responsibility and firm financial performance: Comparison analyses across industries and CSR categories. American Journal of Business, 32(3/4): 106–133.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Journal of Financial Economics, 3(December 2000): 305–360.

Jiang, H., & Zhang, H. (2018). Regulatory restriction on executive compensation, corporate governance and firm performance Evidence from China. Asian Review of Accounting, 26(1): 131–152.

Kato, T., & Kubo, K. (2006). CEO compensation and firm performance in Japan: Evidence from new panel data on individual CEO pay. Journal of the Japanese and International Economies, 20(1): 1–19.

Malik, M. (2015). Value-Enhancing Capabilities of CSR: A Brief Review of Contemporary Literature. Journal of Business Ethics, 127(2): 419–438.

Nelling, E., & Webb, E. (2009). Corporate social responsibility and financial performance: The "virtuous circle" revisited. Review of Quantitative Finance and Accounting, 32(2): 197–209.

Ozkan, N. (2011). CEO Compensation and Firm Performance: An Empirical Investigation of UK Panel Data. European Financial Management, 17(2): 260–285.

Shao, L. (2019). Dynamic study of corporate governance structure and firm performance in China: Evidence from 2001-2015. Chinese Management Studies, 13(2): 299–317.
Sigler, K. J. (2011). CEO Compensation and Company Performance. Business and Economics Journal, 1–9.

Taouab, O. (2019). Firm Performance : Definition and Measurement Models, 15(1): 93–106.
Yeh, C. C., Lin, F., Wang, T. S., & Wu, C. M. (2019). Does corporate social responsibility affect cost of capital in China? Asia Pacific Management Review.