

Managerial Ability and Corporate Social Responsibility

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Abstract—The article uses the listed companies in Shanghai and Shenzhen in 2011-2017 as a research sample, uses the Demerjian (2012) Dea-Tobit two-stage model to measure managerial capabilities, and uses OLS regression to test the specific impact of managerial capabilities on corporate social responsibility. It analyzes the role played by the nature of property rights and the concentration of equity in the process of managers' ability to influence corporate social responsibility. The empirical results show that there is a significant positive correlation between managerial ability and corporate social responsibility, that is, the improvement of managerial ability can promote enterprises to actively perform social responsibility. Further research found that state-owned property rights and equity concentration are significantly positively correlated with corporate social responsibility, and the interactions between state-owned property rights and managerial capabilities, and between equity concentration and managerial capabilities will also strengthen enterprises.

Index Terms—Managerial ability, corporate social responsibility, nature of property rights, equity concentration.

I. INTRODUCTION

On November 23, 2018, the "Blue Book of Corporate Social Responsibility (2018)" was released to the public. The book pointed out: In 2018, the overall level of social responsibility of Chinese companies was low. Among them, the top 300 domestic companies are still in the stage of catching up. Another half of the companies are in the bystander stage; the social responsibility levels of different property rights and industry categories are clearly different. The social responsibility index of state-owned enterprises is significantly higher than that of private enterprises and foreign-funded enterprises in China, and the social responsibility index of the power industry is significantly higher than other industry. There are many reasons for the low level of corporate social responsibility in China. The ownership structure, the characteristics of the board of directors, the incentive system for managers, market share, government regulation, and social pressure have a relatively significant impact on corporate social responsibility. In addition, corporate operation is managed and executed by specific people, so the individual characteristics (gender, age, education level, government background, term of office, etc.) of the high-level managers will also affect the company's fulfillment of social responsibilities. However, management ability cannot be determined only by the specific characteristics of individuals. It is the ability of managers to use their own knowledge and internal and external information to integrate corporate resources to create benefits for the company. Therefore, it is necessary to use the overall

evaluation index of managerial ability to study the relationship between it and corporate social responsibility.

Domestic research on managerial ability and corporate social responsibility mostly focuses on the influence of individual characteristics of managers and institutional environmental factors on it, but seldom integrates these individual characteristics into management capabilities and analyzes the relationship between managerial capabilities and corporate social responsibility. This paper uses the Demerjian (2012) Dea-Tobit model to calculate the managerial capabilities of the sample companies and analyze the specific impact of managerial capabilities on corporate social responsibility.

II. HYPOTHESIS DEVELOPMENT AND RELATED LITERATURE

The influence mechanism of manager's ability on corporate social responsibility can be seen from two aspects: First, manager's ability is a concrete manifestation of the individual characteristics of senior managers, and the individual characteristics of managers (gender, age, education, educational background, work Background, etc.) directly affect the performance of corporate social responsibility. The gender of senior managers has an important impact on corporate social responsibility decisions. When the CEO of a company is female or the proportion of women in the senior management team increases, the quality of corporate social responsibility is significantly improved. If the institutional environment is added, the more backward the institutional environment, the more obvious the positive effects of female executives in improving the quality of corporate social responsibility (Xu Xixiong and Li Yaoqin, 2018). The age, education and social reputation of senior managers also have an impact on the performance of corporate social responsibilities. The older, highly educated and well-reputed management team can significantly inhibit social responsibility report impression management behavior; management team's social reputation and gender heterogeneity can also significantly inhibit the degree of impression management in social responsibility reports, while the heterogeneity of academic background and professional background further aggravate the degree of impression management in social responsibility reports (Zhang Zhengyong and Chen Hong, 2018). The overseas background of senior executives is positively related to the disclosure of corporate social responsibility; the overseas work background of senior executives has a stronger effect on the quality of corporate social responsibility information disclosure than the overseas study background of senior executives; compared with overseas training, visiting studies and overseas post-doctoral research, the overseas study background of senior executives has a stronger effect on improving the quality of corporate social responsibility

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information disclosure (Jiang Yaoming and Lai Yan, 2019). In addition, Management's shareholding status, tenure, salary income, self-confidence, etc. [1]. (Song Yan and Fang Beibei, 2019) also affect corporate social responsibility. The tenure characteristics and salary incentives of the senior management of listed companies have a significant impact on the quality of corporate social responsibility information disclosure. The resignation of the general manager will deteriorate the quality of corporate responsibility information disclosure. The length of the remaining tenure is positively correlated with the quality of corporate social responsibility information disclosure; senior shareholding ratio and annual salary income are positively correlated with the quality of corporate social responsibility information disclosure (Zheng Guanqun *et al.*, 2015).

Secondly, managerial ability has an indirect influence on corporate social responsibility. The ability of managers is directly related to the performance of enterprises. There is a positive correlation between managerial capabilities and corporate performance. Corporate social responsibility and corporate performance have a linkage effect [2] (Wang Wencheng *et al.*, 2014), the improvement of corporate performance will promote companies to actively fulfill their social responsibilities (Yang Chunfang, 2009; Zhang Zhaoguo *et al.*, 2013; Zhang Chuan *et al.*, 2014). Studies have shown that strong managerial abilities can reduce corporate underinvestment [3] (Li Hongjie, 2016), improve corporate investment efficiency [4] (Gong Minhuan and Wang Lili, 2017; Li Yanshan *et al.*, 2018), and improve corporate performance [5] (Sun Huilin, 2016; He Huiqin, 2018), so that companies have more funds to fulfill their social responsibilities; strong managers can straighten out the company's internal relationships and improve the quality of internal control; strong managers can create more liquidity for the company and take more risks [6] (He Weifeng *et al.*, 2016), invest in high-risk projects, increase corporate productivity [7] (Berk JB and Stanton R, 2007), and improve corporate earnings quality (Demerjian *et al.*, 2013); strong managerial abilities can reduce the risk of corporate default and make Companies obtain higher credit ratings [8] (Bonsall SB *et al.*, 2017), reducing their financing costs; the stronger the manager's ability, the more likely companies are to participate in tax planning [9] (Koester A *et al.*, 2017), and legal tax avoidance increases business efficiency. Therefore, the stronger the managerial ability, the better the corporate financial performance and the higher the corporate value. Managers with high management abilities will lead the company to achieve better operating results, which will also help the company fulfill its corporate social responsibility. Therefore, this article assumes:

H₁: Under the circumstance that other conditions remain unchanged, the manager's ability has a positive influence on corporate social responsibility. The stronger the manager's ability, the more active the company will perform its social responsibility.

H₂: Under the circumstance that other conditions remain unchanged, the influence of the managerial ability of state-owned enterprises on corporate social responsibility is higher than that of other property right enterprises.

Chinese current economic system is dominated by the public-owned economy, and multiple ownership economies

develop together. Among them, the state-owned economy is the main component of the public-owned economy, and state-owned enterprises are the backbone of the development of the national economy. State-owned enterprises are owned or controlled by the state. Under this economic system, state-owned enterprises are not only the main body of the market, but also the main body of the socialist economy and macro-control. As the main body of the market, state-owned enterprises have the responsibility to improve corporate competitiveness, consumer responsibility, stakeholder and partner responsibility, employee responsibility, community responsibility, and ecological environment responsibility; as the socialist economic body, state-owned enterprises are responsible for maintaining the socialist economic body. The social responsibility of ensuring the socialist income distribution system, promoting common prosperity, and building a socialist civilization; as the main body of macro-control, state-owned enterprises need to promote economic and social development, take the lead in implementing national macro-control policies, safeguard national security, realize national strategies, and promote the country Social responsibility for major technological innovation and improvement of society and people's livelihood [10] (Chen Yanhe, 2018). Taking China Post as an example, if it is only based on economic benefits, setting up business outlets in remote places cannot increase its profitability. It is precisely that Logistics in remote areas can be guaranteed because of the company's existence. On the other hand, the private economy, mainly under the goal of maximizing benefits, or for some purpose, will fulfill its social responsibilities. Taking other private logistics companies as an example, these companies have a large number of saturated locations in central cities, but they have fewer locations in remote areas where the circulation of goods is urgently needed. Most of the items are sent to customers by post. The different nature of property rights cannot determine whether an enterprise fulfills its social responsibilities, but it can affect the extent to which an enterprise fulfills its social responsibilities. Compared with other types of enterprises, state-owned property right companies are more inclined to perform social responsibilities (Yang Zhongzhi, 2012), and are more able to use social responsibility information to convey company information (Tan Xue, 2017). In addition, among state-owned listed companies, the degree of equity concentration and social responsibility performance is significantly positively correlated [11] (Feng Lili *et al.*, 2011). As an important aspect of corporate social responsibility, social donations are used as research objects. Differences in the nature of property rights may lead to different levels of donations. The level of charitable donations of private enterprises is significantly higher than that of state-owned enterprises (Chen Lihong, Zhang Longping, Ye Xin, 2015). State-owned enterprise donations and performance show an inverted U-shaped relationship, and there is an optimal level (Pan Qi, Zhu Yiming, Lin Feng, 2015). Corporate social responsibility is contagious. The property right structure affects the "contagious" relationship of corporate social responsibility. The average corporate social responsibility of enterprises in the same industry helps to improve the corporate social responsibility of state-owned companies, but

it cannot affect the corporate social responsibility of non-state-owned companies. Further analysis of the infection mechanism of non-state-owned companies shows that the sensitivity of the social responsibility industry will increase the positive impact of the average corporate social responsibility of the industry on the corporate social responsibility of non-state-owned companies [12] (Liu Bo and Lu Jiarui, 2018). Taking social donations as an example, state-owned enterprises donate more than private enterprises. That can help to alleviate the difficulties of private enterprises in donation and drive the donations of private enterprises. This kind of driving effect is especially obvious for small-scale private enterprises with little donation experience [13] (Pan Qi, 2018). In addition, the spillover effect of social responsibility between state-owned enterprises and private enterprises is multidimensional. When the nature of ownership is the same, the social responsibility performance of surrounding companies will positively and significantly affect the social responsibility performance of the focus enterprise; when the nature of ownership is different, the social responsibility performance of surrounding companies will also positively and significantly affect the social responsibility performance of the focus company; when the above two spillover effects coexist, the interaction effects produced are interchangeable [14] (Liu Chunji and Zhu Menglan, 2018). Therefore, this article assumes:

H₃: Under the same other circumstances, for a listed company whose ultimate controller is state-owned capital, the higher its degree of fulfilling its social responsibility.

III. DATA, VARIABLE DEFINITIONS, AND MODEL SETTING

A. Sample Selection and Data Sources

This article takes the listed companies in Shanghai and Shenzhen stock markets from 2010 to 2017 as the research sample, and draws on existing domestic research to make the following adjustments to the sample: (1) Exclude financial listed companies because of the specific content of the financial statements of financial listed companies And the presentation method has its own particularities and is different from other types of listed companies; (2) Exclude samples with missing values for each indicator in seven years; (3) Winsorize the manager's ability and corporate social responsibility index. After adjustment, 16274 observations were finally obtained. In this study, we obtain data from the CSMAR database, and Stata15.0 is used for data collation and analysis.

B. Variable Definitions

1) Corporate social responsibility index

According to the stakeholder theory, the corporate social responsibility should include the responsibility to shareholders, creditors, employees, customers, the government and society. This article uses Chen Zhi and Xu Guangcheng (2012) to construct a weighted corporate social responsibility index to evaluate the performance of corporate social responsibility. The specific calculation method is as follows:

Modified social responsibility contribution = distributed

dividends × distributed profits and dividends/corporate social responsibility contribution + total interest expense × total interest expense/corporate social responsibility contribution + payment for employees × payment for employees/corporate social responsibility contribution + (paid Various taxes-refunded taxes) × (various taxes paid-refunded taxes) / corporate social responsibility contribution + purchase of goods expenditure × purchase of goods expenditure / corporate social responsibility contribution + operating cost × operating cost / corporate social responsibility contribution + donation expenditure × donation expenditure / corporate social responsibility contribution

Among them, the responsibility to shareholders is expressed in dividends distributed; the responsibility to bondholders is expressed in interest expenses; the responsibility to employees is expressed in cash payments to employees; and the responsibility to suppliers is expressed in terms of purchase expenses for goods and services. Representation; Responsibility to customers is represented by the operating cost of the company; Responsibility to the government is represented by the actual tax payment amount of the company (various taxes paid-tax refunds); Responsibility to the society is represented by donation expenditure.

Taking into account the different sizes of enterprises, if the absolute value of the social responsibility contribution is compared, the conclusion is quite controversial. Therefore, the adjusted corporate social responsibility contribution is divided by the total corporate assets to obtain the corporate social responsibility index. This method can eliminate the impact of scale on the company and reflect the true level of corporate social responsibility.

2) Manager ability

Manager ability is the ability of enterprise management to comprehensively use various information, allocate internal and external resources, and create value for the enterprise. It is more difficult to quantify managerial capabilities. Scholars conduct research on fund managers, and through indicators such as rate of return, it can be concluded that some managers are better than others, but the evidence of specific management capabilities is difficult to be convincing. Jensen (1968) and Carhart (1997) believe that there is no evidence of management ability. First, there is a well-known statistical difficulty in directly estimating expected returns. A large amount of data is required to determine whether one manager can generate greater expected returns than another. Second, as pointed out by Burke and Green (2004), even if managers do have the ability, even if a large amount of data is available, the return of open-end funds in a competitive market will not appear, because the manager captures all of the ability benefit. In order to better evaluate the manager's ability, this paper adopts the method of Demerjian et al (2012) to calculate the manager's ability. Its main idea is that the efficiency of enterprise operation is caused by the factors of managers and non-managers. After removing the factors of non-managers, it is the manager's contribution to the company's operational efficiency, which is used as an indicator of the manager's ability. The specific steps to use the DEA-Tobit model to separate management capabilities from operational efficiency are:

First, the data envelopment analysis method (DEA) is used

to calculate the operating efficiency of enterprises by industry, and the model (1) is used to calculate the output-oriented operating efficiency under the condition of constant returns to scale. Among them, OI is operating income, it is the only output variable, and the input variables are as follows: OC is operating cost, FA is net value of fixed assets, IA is intangible assets, R&D is R&D expenditure, and SME is the sum of sales expenses and management expenses.

$$\text{MaxFE} = \frac{\text{OI}}{\delta_1 \text{OC} + \delta_2 \text{FA} + \delta_3 \text{IA} + \delta_4 \text{R\&D} + \delta_5 \text{SME}} \quad (1)$$

Secondly, the operational efficiency of an enterprise is not only affected by the characteristics of the enterprise itself, but also by the ability of the manager. After removing the contribution of the characteristics of the enterprise to the operation efficiency, the contribution of the manager's ability will be obtained. Using the Tobit model, model (1) is used to calculate the operating efficiency as the dependent variable, the company characteristic variable is selected as the independent variable, and the company characteristic variables are selected as independent variables, then the operating efficiency that cannot be explained by the company characteristic variables is regarded as the manager's ability. Considering the availability of data and the actual situation of the company, this paper takes five variables of company size, market share, free cash flow, and time to market as the company's characteristic variables. Among them, company size is represented by the natural logarithm of the total assets; Market share is represented by Herfindahl index of operating income; Free cash flow is a dummy variable, expressed by the free cash flow of the enterprise, when the free cash flow of the enterprise is positive, it is taken as 1, otherwise it is 0; Listing time is the company's listing period.

C. Control Variables

With reference to the research of He Weifeng *et al.* (2016) and Li Yanxi *et al.* (2018), this paper selects company size (Size), return on assets (ROA), debt to assets (LEV), company growth (GROW) and other indicators as control variables [15]. At the same time, the annual and industry dummy variables are included to control the influence of the year and industry on the explained variables. The definition and calculation method of variables are shown in Table I.

TABLE I: VARIABLE DEFINITION

genre	name	symbol	definition
Dependent Variable	Corporate social responsibility	CSR	Drawing on Chen Zhi and Xu Guangcheng (2012) to calculate a weighted CSR index
	managerial ability	MA1	Using DEA-Tobit to Calculate Managerial Competence with reference to Demerjian et al (2012)
	Managerial ability(decimal)	MA10	The managerial competency values were averaged into ten groups from 1 to 10, in ascending order.
Independent Variable	Manager ability (two equal divisions)	MA2	Compare the value of managerial competence with its median and take 1 if it is greater than the median and 0 otherwise.
Control	Enterprise size	SIZE	Natural logarithm of total

Variable			corporate assets
s	Debt ratio	Lev	Total enterprise liabilities divided by total enterprise assets
	Company growth	Growth	Operating income growth rate Operating income current year current quarter amount - Operating income prior single quarter amount) / (Operating income prior single quarter amount)
	Profitability	ROA	Net profit divided by total asset balance
	Industry dummy	Industr y	Industry dummy variables
	Industry dummy	Year	Year dummy variables

D. Model Setting

$$\text{CSR}_{it} = \alpha_0 + \alpha_1 \text{MA}_{it} + \alpha_2 \text{SIZE}_{it} + \alpha_3 \text{LEV}_{it} + \alpha_4 \text{GROWTH}_{it} + \alpha_5 \text{ROA}_{it} + \sum \text{INDUSTRY} + \sum \text{YEAR} \quad (2)$$

The difference in corporate social responsibility mainly stems from the operating efficiency of the enterprise. In addition to objective factors, the operating efficiency is mainly controlled by the management capabilities of the top level of the enterprise.

IV. DESCRIPTIVE STATISTICS AND EMPIRICAL RESULTS

A. Descriptive Statistics

Table II is a descriptive statistical table of variables. The results in the table show that the difference between the maximum value and the minimum value of corporate social responsibility (CSR_Index) is 12.474, indicating that the corporate social responsibility index is quite different among different companies. The average value of the company's managerial ability (MA) is -0.002, the median is -0.011, the minimum is -0.315, and the maximum is 0.427, indicating that the managerial capabilities of the sample companies are also significantly different. There are big differences in corporate social responsibility and managerial capabilities among listed companies. Whether this difference can explain the relationship between managerial capabilities and corporate social responsibility needs further verification. From the point of view of the control variables, the average value of the company's asset-liability ratio (LEV) is 0.452, that is, the ratio of debt to equity of the sample company is generally maintained at 1:1, indicating that debt and equity are more balanced; the growth of the enterprise (Growth) The average value is 0.225, indicating that the sample companies have generally good growth; the average of the nature of corporate property rights is 0.417, indicating that the sample companies' ultimate control rights in non-state-owned enterprises account for 41.7%.

Table III is the correlation coefficient table of the variables. It can be seen from the table that there is a significant positive correlation between managerial ability and corporate social responsibility, which also preliminarily confirms that the stronger the managerial ability, the better the company can fulfill its social responsibility, and the higher its social responsibility index, which supports Hypothesis 1. In terms

of control variables, the company’s capital structure, corporate size, growth, and listing years are all significantly positively correlated with corporate social responsibility. The nature of corporate property rights is significantly positively

correlated with corporate social responsibility, indicating that the state-owned nature can better promote corporate social responsibility.

TABLE II: DESCRIPTIVE STATISTICS

	Mean	St.Dev	min	Median	max	p25	p75	t-value
csrindex	.431	.419	.028	.305	2.481	.17	.528	131.072
ma1	-.002	.142	-.315	-.011	.427	-.098	.079	-1.449
ma2	1.5	.5	1	1	2	1	2	382.587
ma10	5.492	2.872	1	5	10	3	8	243.926
roaa	.034	.056	-.205	.032	.193	.011	.06	77.595
lev	.452	.217	.054	.446	.967	.279	.616	265.362
growthb	.225	.643	-.604	.107	4.728	-.031	.281	44.564
size	22.152	1.296	19.305	22.008	26.008	21.261	22.9	2180.987
age	2.148	.776	0	2.398	3.178	1.609	2.833	353.113
os	.417	.493	0	0	1	0	1	107.979

TABLE III: CORRELATION COEFFICIENT

	CSRINDEX	MA1	ROAA	LEV	GROWTHB	SIZE	AGE	OS
CSRINDEX	1	0.46*	-0.00	0.23*	0.04*	0.07*	0.05*	0.13*
MA1	0.44*	1	0.29*	0.07*	0.23*	0.05*	-0.01	0.01
ROAA	-0.01	0.29*	1	-0.40*	0.31*	-0.00	-0.19*	-0.14*
LEV	0.21*	0.06*	-0.38*	1	-0.03*	0.46*	0.35*	0.29*
GROWTHB	0.03*	0.23*	0.16*	0.02*	1	0.07*	-0.15*	-0.14*
SIZE	0.06*	0.01	0.05*	0.42*	0.03*	1	0.28*	0.32*
AGE	0.10*	-0.00	-0.16*	0.37*	-0.01	0.26*	1	0.42*
OS	0.13*	0.00	-0.10*	0.29*	-0.09*	0.33*	0.43*	1

B. Empirical Results

In order to make up for the shortcomings in the calculation of managers' ability, this article refers to the practice of He Weifeng (2016). According to the size of managers' ability indicators, they are divided into two and ten equals by industry and year to generate ma2 and ma10. Table IV shows the regression results of managerial capabilities and corporate social responsibility. The results in the table show that the coefficients of ma1, ma2 and ma10 are all positive and significant at the 1% level, indicating that the stronger the manager’s ability, the higher the corporate social responsibility index, that is, the stronger the company’s willingness to perform social responsibility. The result verified Hypothesis 1. As the makers of corporate decision-making, managers are responsible for the optimal allocation of resources that the company has. The stronger the manager’s ability, the better his ability to allocate resources. The company’s resources can be used efficiently and achieve better corporate benefits, so that more resources can be invested in the responsibility to stakeholders. Managerial ability has a positive impact on the performance of corporate social responsibility. The strong managerial ability also be due to their deep education background, overseas experience, government background, long term of office and other factors. These factors can directly promote enterprises to increase investment in corporate social responsibility and improve the level of corporate social responsibility.

TABLE IV: MANAGERIAL ABILITY AND CORPORATE SOCIAL RESPONSIBILITY

	(1) csrindex	(2) csrindex	(3) csrindex
MA1	1.369*** (0.020)		
MA2		0.294*** (0.006)	
MA10			0.066*** (0.001)
ROA	-0.676*** (0.057)	-0.192*** (0.058)	-0.649*** (0.057)
LEV	0.223*** (0.016)	0.313*** (0.017)	0.229*** (0.016)
GROWTHB	-0.033*** (0.004)	-0.005 (0.004)	-0.022*** (0.004)
SIZE	0.013*** (0.002)	0.004* (0.003)	0.009*** (0.002)
AGE	0.015*** (0.004)	0.020*** (0.004)	0.023*** (0.004)
CONS	0.019 (0.049)	-0.271*** (0.053)	-0.239*** (0.050)
INDUSTRY	CONTROL	CONTROL	CONTROL
YEAR	CONTROL	CONTROL	CONTROL
Obs.	16274	16274	16274
R-squared	0.371	0.303	0.370

Standard errors are in parenthesis
 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In terms of control variables, company size, financial leverage, and listing years are significantly positively correlated, indicating that larger corporate sizes, higher financial leverage, and longer listing years will make companies more willing to assume social responsibility. The larger the company, the more resources it can allocate, and

the more resources that can be invested in fulfilling social responsibilities; the higher the financial leverage (debt ratio) of the company, the higher its future funding costs will increase. The fulfillment of social responsibility can establish a better corporate image to help increase bargaining space for follow-up financing activities; the longer the listing period, the more opportunities it has for financing through the stock market. Maintaining a good corporate image will help the company's follow-up financing activities. In addition, the profitability and growth of companies and corporate social responsibility are significantly negative, indicating that companies with better growth and better profitability have lower corporate social responsibility. This may be due to the fact that such enterprises are in a period of rapid growth and need to fully invest existing resources into their business operations, so the willingness to perform social responsibilities is not high.

V. ADDITIONAL ANALYSES

The above studies have shown that the stronger the manager's ability, the higher the corporate social responsibility index. On this basis, this article will continue to explore the relationship between managerial capabilities and corporate social responsibility when the nature of property rights and the concentration of equity are different.

A. *The Nature of Property Rights, Managerial Abilities and Corporate Social Responsibility*

The difference in the nature of property rights makes companies different in their enthusiasm for fulfilling their social responsibilities and their contributions. This is because state-owned enterprises are not only the same market entities as private enterprises, but also socialist economic entities and macro-control entities. When the country implements the strategy of developing the western region, revitalizing the Northeast Industrial Base, and the construction of the Xiongan New Area, it is the state-owned enterprise that takes the lead; when the country faces major natural disasters and other critical events, it is the state-owned enterprise that takes the lead in disaster relief and donates the most; state-owned enterprises also account for the largest proportion of the country's various taxes; in major national scientific research projects, state-owned enterprises also contribute the most. In addition, the nature of property rights is different, and the conditions and procedures for selecting and hiring senior managers of their companies are also very different. With the gradual deepening of the reform of state-owned enterprises, the selection and recruitment of senior managers of state-owned enterprises is also gradually promoting market-based selection and recruitment. When evaluating whether a candidate is suitable for a company, it is necessary to consider the candidate's past business performance, but also requires that the candidate must be loyal to the party, be brave to innovate, manage the enterprise well, prosper the enterprise, and be honest and uncorrupted. Under this selection requirement, companies managed by selected senior managers are more inclined to respond to national policies and fulfill social responsibilities.

In order to distinguish the nature of corporate property rights, according to whether the ultimate controlling party is

state-owned shares, listed companies are divided into state-owned holding companies and non-state-owned holding companies, Non-state-owned holding companies include private enterprises, foreign-funded enterprises and other enterprises. Compared with non-state-owned holding companies, state-owned holding companies have certain particularities in terms of business philosophy, development goals, and governance structures. For example, in addition to fulfilling the business objectives, state-owned holding companies also play an important role in stabilizing the government's economy, adjusting structure, and promoting employment. Most of the managers of state-owned holding companies are appointed by government departments, and some of the managers also retain government administrative duties. Therefore, the managers of state-owned enterprises have greater power in the enterprise than in non-state-controlled enterprises. However, most powerful managers have a mentality of seeking "stability" in the course of business operations. As long as they pass their tenure steadily, they can get a chance for promotion. Therefore, these managers tend to be too conservative when facing high-yield but slightly risky investments. When the government encourages enterprises to increase investment in local economic development, the managers of state-owned enterprises will put the economic interests of the enterprises in a lower position when making decisions due to political considerations. In order to analyze the impact of property rights factors on corporate social responsibility, the interaction of property rights factors and managerial capabilities on corporate social responsibility, this paper establishes a model as follows:

$$\begin{aligned}
 CSR_{it} = & \alpha_0 + \alpha_1 MA_{it} + \alpha_2 OS_{it} + \alpha_3 MA_{it} \times OS_{it} \\
 & + \alpha_4 SIZE_{it} + \alpha_5 LEV_{it} + \alpha_6 GROWTH_{it} \quad (3) \\
 & + \alpha_7 ROA_{it} + \sum INDUSTRY + \sum YEAR
 \end{aligned}$$

In model (3), OS is a dummy variable of the nature of property rights. When the listed company is a state-controlled company, it is assigned a value of 1, and when it is a non-state-controlled company, it is assigned a value of 0. The remaining variables are the same as in model (3). The regression results are shown in Table V below. It can be seen from the table that when the property right is a state-owned holding company, the coefficient is positive and significant at a significance level of 1%, indicating that the property right of a state-owned holding company is positively related to corporate social responsibility compared to private enterprises. State-holding companies are more willing to perform social responsibilities than non-state-holding companies. Moreover, the regression coefficient of MA×OS, which is the intersection of managerial ability and property rights, is significantly positive at the 1% level, which shows that different property rights systems will affect the relationship between managerial capabilities and corporate social responsibility. Specifically, compared with non-state-holding companies, managerial capabilities have a stronger role in promoting corporate social responsibility in state-holding companies. First of all, as far as the relationship between the nature of property rights and corporate social responsibility is concerned, state-owned holding companies

are ultimately controlled by the state, which means that the operation of enterprises includes the will of the state who ultimately serves the people. Therefore, compared with non-state-controlled enterprises, State-owned holding enterprises have more responsibility and obligation to serve the society. Secondly, state-owned holding companies are generally vital industries that must be controlled by the state. They are often in a monopoly position in their industries. Therefore, the stronger the managerial capabilities of state-owned holding companies, the easier it is to take advantage of market advantages and resource advantages to create greater business performance and increase investment in stakeholders, so the level of fulfilling social responsibility is higher.

TABLE V: THE NATURE OF PROPERTY RIGHTS, MANAGERIAL ABILITIES AND CORPORATE SOCIAL RESPONSIBILITY

	(4) state-holding companies	(5) Non-state-hold ing companies	(6) Interactive item
MA1	1.268*** (0.025)	1.505*** (0.033)	1.275*** (0.026)
OS			0.037*** (0.006)
OS*MA			0.207*** (0.038)
ROAA	-0.507*** (0.067)	-0.936*** (0.100)	-0.642*** (0.057)
LEV	0.245*** (0.020)	0.183*** (0.028)	0.228*** (0.016)
GROWTHB	-0.036*** (0.005)	-0.020** (0.008)	-0.029*** (0.004)
SIZE	0.018*** (0.003)	0.007* (0.004)	0.009*** (0.002)
AGE	-0.002 (0.004)	0.027*** (0.008)	0.006 (0.004)
CONS	-0.054 (0.070)	0.120 (0.082)	0.105** (0.051)
INDUSTRY	CONTROL	CONTROL	CONTROL
YEAR	CONTROL	CONTROL	CONTROL
Obs.	9481	6793	16274
R-squared	0.340	0.396	0.373

Standard errors are in parenthesis
 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

B. Equity Concentration, Managerial Abilities and Corporate Social Responsibility

Studies have found that the higher the concentration of equity, the more inclined listed companies are to perform social responsibilities; the concentration of state-owned listed companies' equity is significantly positively correlated with the performance of social responsibilities, and the concentration of non-state-owned listed companies has no significant impact on the performance of social responsibilities (Feng Lili, Lin Fang, Xu Jialin, 2011). The difference in the concentration of listed company's equity affect the company's internal governance structure, which has a certain impact on the ability of managers, and then affect corporate performance. Therefore, it is of practical significance to research the impact of managerial capabilities on corporate social responsibility under different equity concentration situations. In model (4), First is a dummy variable of equity concentration. When the shareholding ratio of the largest shareholder of a listed company is lower than the average level of the same industry this year, First takes 0; otherwise, it is 1. The model is established as follows:

$$\begin{aligned}
 CSR_{it} = & \alpha_0 + \alpha_1 MA_{it} + \alpha_2 FIRST_{it} + \alpha_3 MA_{it} \times FIRST_{it} \\
 & + \alpha_4 SIZE_{it} + \alpha_5 LEV_{it} + \alpha_6 GROWTH_{it} \\
 & + \alpha_7 ROA_{it} + \sum INDUSTRY + \sum YEAR
 \end{aligned}
 \tag{4}$$

It can be seen from the model results (table VI) that the regression coefficient of the crossover term of managerial ability and equity concentration is significantly positive at the level of 1%, which indicates that equity concentration enhances the relationship between managerial ability and corporate social responsibility. To a certain extent, the higher the concentration of equity, the stronger the willingness of managers to fulfill corporate social responsibilities. The reason for this may be that the higher the degree of equity concentration, the greater the power held by senior managers representing major shareholders. In this situation, the stronger the manager's ability, the more prominent it is in fulfilling social responsibilities. In particular, in state-controlled enterprises, managers themselves assume the role of government agents. The more concentrated the equity, the less pressure it faces from all parties in fulfilling its social responsibilities, which is more conducive to the corresponding government's macro policies such as social donations and increasing local investment.

TABLE VI: EQUITY CONCENTRATION, MANAGERIAL ABILITIES AND CORPORATE SOCIAL RESPONSIBILITY

	(7) High concentration	(8) Low concentration	(9) Interactive item
MA	1.450*** (0.030)	1.281*** (0.027)	1.308*** (0.027)
ROA	-0.984*** (0.090)	-0.439*** (0.072)	-0.683*** (0.057)
FIRST			0.028*** (0.005)
FIRST2*MA			0.108*** (0.037)
LEV	0.228*** (0.026)	0.214*** (0.021)	0.223*** (0.016)
GROWTH	-0.035*** (0.007)	-0.030*** (0.005)	-0.032*** (0.004)
SIZE	0.014*** (0.004)	0.007** (0.003)	0.010*** (0.002)
AGE	0.006 (0.005)	0.029*** (0.005)	0.016*** (0.004)
CONS	0.034 (0.074)	0.122* (0.070)	0.064 (0.050)
INDUSTRY	CONTROL	CONTROL	CONTROL
YEAR	CONTROL	CONTROL	CONTROL
Obs.	8130	8144	16274
R-squared	0.382	0.359	0.372

Standard errors are in parenthesis
 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

VI. CONCLUSIONS AND RECOMMENDATIONS

Under the unpredictable domestic and international political and economic situation, whether an enterprise can survive or develop depends on the manager, because the manager is the makers of corporate decisions and the specific implementers of established decisions. The size of the manager's ability is crucial to the development of the enterprise. Therefore, this paper selects the listed companies on the Shanghai and Shenzhen stock exchanges from 2011 to 2017 as the research sample to analyze the specific

relationship between managerial capabilities and corporate social responsibility. The research shows that there is a significant positive correlation between managerial capabilities and corporate social responsibility. The stronger the managerial ability, the higher the corporate social responsibility index. That is to say, whether it is internal and external training of the enterprise or the manager's own learning, improving the manager's ability can promote the enterprise to fulfill its social responsibility. Further research found that under the different nature of property rights, the nature of state-owned holdings can improve the level of corporate social responsibility; when the nature of property rights is state-owned holdings, the improvement of managerial capabilities will further encourage companies to perform social responsibilities.

The research in this article has enriched the research content of corporate social responsibility. At the same time, it has some enlightenment for the personnel arrangement of listed company managers and the supervision of state-owned assets management departments. On the one hand, government departments should guide non-state holding enterprises, establish corresponding encouragement and restraint mechanisms, and promote non-state-owned consolidation enterprises to actively perform their social responsibilities, which will help improve the overall level of social responsibility of domestic enterprises. On the other hand, in state-owned holding companies, the improvement of managers' capabilities has a stimulating effect on the company's fulfillment of social responsibilities. Therefore, when selecting and hiring managers of state-owned holding companies, they should adhere to the ability-oriented approach to ensure the realization of business objectives and encourage State-owned enterprises assume more social responsibilities.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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