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## Empirical Analysis of Corporate Social Responsibility in China

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**Abstract:** Modern enterprise system can absorb the labor force, capital and operators and fusion in the corporate, it can efficiently allocate resources, encourage people's entrepreneurship and risk-taking, thus help investors, operators and workers to realize the value of their life, it also can increase revenue of the government, promote the social material civilization and spiritual civilization construction. It is the cornerstone of the market economy development. But the development and expansion of modern enterprise also bring some negative phenomenon. Some companies only seek the interests of the shareholders and managers and disregard the social public interests, ignore the protection of workers in enterprise management. They manufacture and sell fake and inferior commodities, malicious escape debts, unfair competition, environmental pollution, etc., all of these phenomena are the reflection of a certain extent of cynical, single management goals. How to overcome the inherent problem of law itself and weakness of the corporate management becomes the urgent challenge. In the study, the relevant instances of enterprises are analyzed, relevant meaningful conclusions are obtained.

**Key words:** Social responsibility, empirical data, corporate, analysis

### INTRODUCTION

As it is known that there are business and academic discussion on issue of corporate social responsibility. In theory, the discussion involves how to coordinate a competitive market economy and a compassionate democratic society (Marshall and Locksley, 1983; Dalton and Cosier, 1982; Votaw, 1975). From the point of view of reality, corporate social responsibility has definitely regarded as an important source of competitive advantage. From the perspective of social policy and culture, how to share the achievements of economic development to all labourers and improve labour incoming standards are the methods to achieve social stability and all-round development of the society. As for development in China, with the developments of social and economic, the domestic labour standards should be improved according to the international labour standards, thus achieve a more equitable distribution of income, improve living standards of workers. It also can resolve the social conflicts in the developments; it is also the guarantees of the social stability which is one of the essential requirements of comprehensive and harmonious development. (Donaldson and Dunfee, 1994; Donaldson and Dunfee, 1995; Epstein, 1977). At present domestic theory research on corporate social responsibility is often confined to theoretical analysis and it is lack of empirical support, so there have a big debate on this issue. So, it brings a lot of difficulties on the relevant national policy. In the study, according to the questionnaire of corporate

social responsibility fulfilment situation in Shandong province, through the collection of data, statistical process analysis are performed which can validate the results of theoretical analysis. The conclusions of corporate social responsibility management are obtained and thus the study can provide the empirical basis analysis and useful suggestions for the country (Harrison and Freeman, 1999; European Commission, 2001).

### VARIABLE DEFINITION

**Corporate social responsibility:** Corporate social responsibility is one of the main variables in the study; it also is the evaluation index of fulfilment situation of corporate social responsibility. This index system has many evaluation parameters or factors; they are the employees' rights and interests' protection, environmental protection and sustainable development, corporate integrity, protection of the rights and interests of consumers and the creditors and community relations, social and charitable activities, social responsibility management, etc. Through the questionnaire survey, the data obtained by reference can be added to the evaluation index system; the related score for enterprises also can be concluded.

**Industry factors:** The questionnaires are mainly performed on manufacturing industry, energy industry, construction and real estate industry, service industry and high-tech industry companies.

**Factors of system of ownership:** In this study, according to the enterprise ownership, the enterprises are divided into the state-owned enterprises (including the joint stock company) dominance of state-owned shares, private enterprises, including private shares dominant joint-stock enterprises and foreign-funded enterprises (including Sino-foreign joint venture enterprise and foreign enterprise) in China.

**Enterprise scale factor:** There are a variety of indicators to measure enterprise scale, in brevity, it is based on the total assets of enterprise scale. According to the enterprise's total assets, the enterprises are classified into three kinds of types: Total assets of the small and medium-sized enterprises (total assets is below 50 million Yuan), the total assets of the large enterprises (total assets is among 5000 Wan Yuan and 500 million Yuan), super large enterprises (total assets is equal to or larger than 500 million Yuan).

The growth stage of enterprise: In brevity, in the study, it makes the division of enterprise growth stage, the time of enterprises' set up are the measured factors, the establishment time is not more than 5 years is the first stage: The establishment time more than 5 years but lower than 10 years is taken as the second phase; the establishment time more than 10 years is the third phase.

**Corporate profitability:** This study adopts the margins as evaluation index of corporate profitability. When profit margin is negative, it is considered as poor corporate profitability; when profit margins are between 0 and 10%, enterprise profit ability is taken as average; when profit margins is greater than 10%, enterprise profit ability is strong.

**The board composition:** In the evaluation of board composition and its efficiency, its influence is very wide, according to the feasibility, in the study, it makes the research of the worker representatives and relevant condition of independent directors and corporate social responsibility from the view of the board members, in order to verify the internal corporate governance mechanisms to enhance the role of corporate social responsibility.

## RESEARCH HYPOTHESIS

**Characteristics of enterprise industry and corporate social responsibility:** As known that enterprise's environment and industry value chain in different industry are not the same, the staff working conditions of

different industries, enterprises and the environment relations, the enterprise and the consumer and supplier relationships are also different. Like coal oil and other energy companies, they influence the environment far more than the common company, the safety of employee also is far worse than other industries. Hence, the following assumptions can be obtained:

- **Hypothesis 1:** The enterprises of different industries, there is a great difference in the social responsibility
- **Hypothesis 2:** Hi-tech enterprises' social responsibility is the best, manufacturing companies is the second place, energy companies is the worst

**The characteristics of corporate ownership and corporate social responsibility:** Behaviours of state-owned enterprises, private enterprises and foreign-funded enterprises are significantly different, the owners of the state-owned enterprises are the people, so when making decisions, the rights of employees, the environment, consumers and the protection of the rights and interests of creditors can be taken into considerations; as in western developed countries, the business ethics demand is higher, its social responsibility could be relatively good. As private enterprises started late in China, while the China's market economy is not mature and perfect credit system has not been set up yet, its social responsibility status may not be very optimistic.

Hence, the following assumptions can be obtained:

- **Hypothesis 1:** the enterprises of different ownership, there is a significant difference in the social responsibility
- **Hypothesis 2:** the state-owned enterprises' social responsibility is the best; foreign-funded is the second place, enterprises, private enterprises are the worst

**The characteristics of enterprise scale and corporate social responsibility:** Different scale enterprises, the social responsibility status may be differences. Large corporate' social influence is strong, so they should have greater strength and fulfil social responsibility. Hence, the following assumptions can be obtained:

- **Hypothesis 1:** The different size of business, there is a significant difference in the social responsibility
- **Hypothesis 2:** The larger of the corporate scale, the social responsibility

Table 1: Statistics of CSR score according to different industry

Industry	Manufacturing	The energy sector	Architecture industry	Service industry	High technology industry	Other industries
Number of samples	48.00	17.00	15.00	24.00	17.00	121.00
Sample average	79.52	72.89	77.73	81.50	79.77	78.79

**SAMPLES AND THEIR CHARACTERISTICS**

The measurement of corporate social responsibility needs a tool. The survey method is one of the most widely used research methods in social sciences. Questionnaire is the way by allowing respondents to fill in the questionnaire to collect information. This approach procedure is simple, low cost and has a wide range of investigation and also is convenient for data processing. Its difficulty lies in the design of the questionnaire; it should not only be scientific and reasonable but also needs to be easily understood. In order to get a real reflection of effective corporate social responsibility, in the design process of questionnaire, the consultation of the relevant professionals, social investigation are made before the formal survey. The data of this study is derived from the questionnaire survey. Questionnaire designed is according to China corporate social responsibility evaluation index system, combining with the above comprehensive empirical assumptions. In questionnaire design, questionnaire survey, questionnaire recovery process has got the support from management school of Shandong university relevant government departments.

Based on the above scale in Shandong province administration of industry and commerce registration of enterprises, in the Shandong province enterprise, the 200 companies are randomly selected as the samples. These businesses involve 5 major industries, manufacturing industry, energy industry, construction and real estate industry, service industry and high-tech industry and so on.

According to the enterprise industry grouping scale and ownership situation, about 50 family enterprises in the field are selected to verify the accuracy of the rating scores.

Finally in this study, it clears out the 29 questionnaires with uncompleted information and low degree and gets 121 effective questionnaires, so the valid number of sample is 121.

Collection of corporate social responsibility the self-assessment questionnaire, this study adopts the established scoring methods, evaluation system Corporate Social Responsibility (CSR), the average score of the valid questionnaire ratings of the samples according to the industry is as shown in Table 1, according to the ownership average scores are shown in Table 2, the enterprise average scale scores are presented in Table 3.

Table 2: Statistics of CSR scores according to the characteristics of ownership

Ownership	State-owned	Private	Joint
Number of samples	66.00	33.00	22.00
Sample average	79.35	76.28	80.89

Table 3: Statistics of CSR score according to characteristics of enterprise scale

Enterprise scale	Total assets is below 5 million	Total assets among 5 million and 50 million	Total assets is larger than 50 million
Number of samples	47.00	55.00	19.00
Sample average	75.87	80.62	80.73

**RESULTS**

According to the sample data obtained by questionnaire survey, in the study, according to paper empirical hypothesis, the empirical results are obtained.

**Validation of the assumption:** Through applying the method of single factor, the variances in CSR score between different enterprises of industries are analyzed. Before the analysis of variance, the homogeneity of variances inspection has been made, concomitant probability is about 0.508, it is greater than the significance level of 0.05, so in the each group, the overall variance can be regarded as equal and the variance test conditions are satisfied.

The analysis results of variance are shown as Table 4. It can be seen from Table 4, the F is the value test of variance and its value is about 5.379, concomitant probability is about 0.001, the significance level of concomitant probability is less than the 0.05, which indicates at least one group has significant difference with other groups, or there are significant differences between all the 5 groups. In order to determine the differences, it applies the comparison of LSD multiple, it can be seen from the Table 5, there has significant difference between group 2 and other four groups and its significance level is 0.05 and there was no significant difference between other four groups.

This shows that corporate social responsibility in energy industry is worse than any other industries. There has no significant difference between the manufacturing industry, construction, real estate industry, service industry and high-tech industry in their corporate social responsibility. It is accordance with the working conditions of the energy industry where workers' safety are not guaranteed.

Table 4: Variance analysis results of single factor CSR according to different enterprise industry

Groups	Sum of squares	df	Mean square	F	Significance
<b>Between groups</b>					
Combined	827.058	4	206.764	5.379	0.001
Linear term					
Unweighted	198.936	1	198.936	5.175	0.025
Weight	60.680	1	60.680	1.579	0.211
Deviation	766.378	1	255.459	6.646	0.000
<b>With groups</b>					
Total	4458.928	116	38.439		
	5285.985	120			

Table 5: Multiple comparisons according to the characteristics of enterprise industry

LSD

Enterprises (I)	Enterprises (J)	Mean difference	Standard error	Significance	95% confidence interval	
					Lower bound	Upper bound
1	2	6.6720	1.74984	0.000	3.1614	10.0930
	3	1.7844	1.83396	0.333	-1.8480	5.4168
	4	-1.9845	1.54998	0.203	-5.0553	1.0845
	5	-0.2593	1.74984	0.882	-3.7250	3.2065
2	1	-6.6272	1.74984	0.000	-10.0930	-3.1614
	3	-4.8428	2.19630	0.029	-9.1929	-0.4928
	4	-8.6126	1.96539	0.000	-12.5053	-2.6746
	5	-6.8865	2.12656	0.002	-11.0984	-2.6746
3	1	-1.7844	1.83396	0.333	-5.4168	1.8480
	2	4.4280	2.19630	0.029	0.4928	9.1929
	4	-3.7698	2.04064	0.067	-7.8115	0.2720
	5	-2.0437	2.19630	0.354	-6.3937	2.3064
4	1	1.9854	1.54998	0.203	-1.0845	5.0553
	2	8.6126	1.96539	0.000	4.7199	12.5053
	3	3.7698	2.04064	0.067	-0.2720	7.8115
	5	1.7261	1.96539	0.382	-2.1666	5.6188
5	1	0.2593	1.74984	0.882	-3.2065	3.7250
	2	6.8865	2.12656	0.002	2.6746	11.0984
	3	2.0437	2.19630	0.354	-2.3064	6.3937
	4	-1.7261	1.96539	0.382	-5.6188	2.1666

Table 6: Variance analysis according to corporate ownership characteristics of CSR single factor

Groups	Sum of squares	df	Mean square	F	Significance
<b>Between groups</b>					
Combined	325.658	2	162.829	3.873	0.023
Linear term					
Unweighted	38.962	1	38.962	0.927	0.338
Weighted	1.185	1	1.185	0.028	0.867
Deviation	324.473	1	324.473	7.719	0.006
Within group	4960.327	118	42.037		
Total	5285.985	120			

**The hypothesis verification:** Through the method of single factor analysis, the variance CSR score differences between enterprises of different ownership types are analyzed. Before the variance analysis, the author has carried on the homogeneity of variances inspection, the concomitant probability is 0.402, which is greater than the significance level of 0.05, so it can be thought that the overall variance are equal in each group and it is satisfied with the variance test condition. After the analysis of variance, the following results of the analysis can be obtained, as shown in the Table 6, the test of variance F value is 15.508 and concomitant probability is 0.000. Concomitant probability is less than the significance level of 0.05, which suggests at least one group has

significant difference, or there exists significant differences between other three groups.

In order to get the exact differences, through the comparison LSD multiple, analysis of the results are obtained as shown in Table 7, it can be seen from the table that there was significant difference between the group 2 and the other group and there has no obvious difference between the group 1 and group 3.

The above data show that social responsibility status of private enterprises significantly is worse than that of state-owned enterprises and foreign-funded enterprises. And there has no significant difference between the state-owned enterprises and foreign-funded enterprises in the social responsibility.

Table 7: Multiple comparisons according to characteristics of corporate ownership

LSD

Enterprises (I)	Enterprises (J)	Mean difference (I-J)	Standard error	Significance	95% confidence interval	
					Lower bound	Upper bound
1	2	3.0721	1.38230	0.028	0.3347	5.8094
	3	-1.5367	1.59614	0.338	-4.6975	1.6241
2	1	-3.0721	1.38320	0.280	-5.8094	-0.3347
	3	-4.6088	1.78454	0.110	-8.1426	-1.0749
3	1	-1.5367	1.59614	0.338	-1.6241	4.6975
	2	4.6088	1.78454	0.110	-1.0749	8.1426

Table 8: Single factor variance analysis of CSR according to enterprise scale

Groups	Sum of squares	df	Mean square	F	Significance
<b>Between groups</b>					
Combined	656.435	2	328.218	8.366	0.000
Linear term					
Unweighted	319.815	1	319.815	8.152	0.005
Weighted	1.185	1	509.809	12.994	0.000
Deviation	324.473	1	146.627	3.737	0.056
<b>Within group</b>					
Total	4960.327	118	39.233		
	5285.985	120			

Table 9: Multiple Comparisons according to characteristics of enterprise scale

LSD

Enterprises (I)	Enterprises (J)	Mean difference (I-J)	Standard error	Significance	95% confidence interval	
					Lower bound	Upper bound
1	2	-4.7493	1.24422	0.000	-7.2132	-2.2854
	3	-4.8618	1.70284	0.005	-8.2339	-1.4897
2	1	4.7493	1.24422	0.000	-2.2854	7.2132
	3	-0.1125	1.66681	0.946	-3.4132	3.1883
3	1	4.8618	1.70284	0.005	1.4897	8.2339
	2	0.1125	1.66681	0.946	-3.1883	3.4132

The China's private enterprise is still in its early stage, the consciousness of social responsibility is not strong and the government should create a good environment for the development of private enterprises and strengthen guide of the government, improve the consciousness of the enterprise society responsibility.

**The hypothesis verification:** Through the method of single factor analysis, the variance CSR score differences between enterprises of different ownership types are analyzed.

Before the variance analysis, the homogeneity of variances has been made, the concomitant probability is 0.213, which is greater than the significance level of 0.05, so you can think the overall variance of each group are equal and the variance test condition is satisfied. The variance analysis results of Table 8, it can be seen that the F value of variance test is about 8.366, concomitant probability is 0.000. Concomitant probability is less than the significance level of 0.05, which indicates at least one group has significant difference with other groups, or there exists significant differences between three groups.

From the Table 9, it can be seen that group 1 has significant difference with other groups and the

significance level is 0.05, group 2 and group 3 have no obvious difference. The analysis shows that social responsibility status of small and medium-sized enterprise are obvious different from the social responsibility of large and super-large enterprises and the large and super-large enterprises have no significant difference in the social responsibility. It also suggests that on the other hand the enterprise needs to reach a certain scale then they will have the ability and incentive to fulfill social responsibility.

#### EMPIRICAL CONCLUSIONS AND POLICY IMPLICATIONS

Through the analysis of the empirical results, some of the main empirical research conclusions can be obtained:

First, social responsibility status of the energy industry corporate is worse than any other industry. Energy companies such as coal, electric power, petrochemical, etc. Due to its industry characteristics, the safety of production is poor, the environment pollution is serious and so its social responsibility should be concerned on. So, in the promoting movement of corporate social responsibility, therefore, actual situation

of the industry should be noted and considered and different policies should be adopted, emphasis on corporate social responsibility management progress should be put.

Second, responsibility status of the private enterprise's social significantly is worse than state-owned enterprises and foreign-funded enterprises. As China's market economy is not very perfect, the development of private economy is still in its early stage; enterprise credit system has not been set up. So in order to encourage private economy development, it should protect the rights and interests of workers strengthen safety measures of labour production and environmental protection and carry out the faith construction of private enterprises, makes the positive efforts to quicken the steps of social responsibility construction.

Third, the small and medium-sized enterprise social responsibility status are obvious different to the social responsibility of large and super-large enterprises. Only when the enterprise reaches a certain scale, it has the ability and incentive to fulfil social responsibility. Chinese enterprises are mostly the small scale type and management is not standard. The employee can not get effective protection and they are lack of social responsibility consciousness, therefore, enterprises should be encouraged to expand the scale of the enterprise through the form of merger and acquisition market and improve their management level and competition ability, thus at the same time it will improve the level of China's corporate social responsibility consciousness and practice.

Fourth, enterprise of profitability is poor or losses, its social responsibility status is obvious worse than that of corporate with good profitability. Enterprise economic responsibility is the foundation of the enterprises to fulfil social responsibility, only when the enterprises can operation normally, then it has the ability to carries on the social public welfare activities. Operating performance will influence all aspects of the enterprise behaviour and it cannot be underestimated, the enterprise with good profit ability may have more energy and strength to bear the social responsibility. Chinese companies lack core competitiveness at present, in the lower level of the industry value chain, profit margins is generally lower. Thus strengthen the independent innovation ability and master the core technology, can enhance comprehensive national strength and defence of the need of national industry, it is also the only way to improve corporate social responsibility.

### CONCLUSION

The corporate social responsibility theory is put forward, it is conformed to the trend of globalization and

social development, it will do help to the enterprise to meet the requirements of stakeholders and it also will do help to the management mode innovation and cultivating core competitiveness of the enterprise. Today, the corporate social responsibility is becoming more and more popular, whether developed countries or developing countries, both multinational companies and small and medium-sized enterprise, all need to introspection on them and find the unavoidable problems in the operation of the enterprise. But at present domestic theoretical study of corporate social responsibility is often confined to the knowledge introduced and theoretical analysis and it lacks of empirical support. In the study, through the elaborate design, issuing, recycling the "cognitive and social responsibility fulfilment situation questionnaire" of the enterprises in Shandong province, the valuable data are obtained. It makes the analysis of the current Chinese corporate social responsibility cognition and performance of the situation, based on study, the statistical processing tools are verified, the results of theoretical analysis are proved right and it gives out the reasonable explanation of empirical results.

### REFERENCES

- Dalton, D.R. and R.A. Cosier, 1982. The four faces of social responsibility. *Bus. Horizons*, 25: 19-27.
- Donaldson, T. and T.W. Dunfee, 1994. Toward a unified conception of business ethics: Integrative social contracts theory. *Acad. Manage. Rev.*, 19: 252-284.
- Donaldson and T.W. Dunfee, 1995. Integrative social contracts theory: A communitarian conception of economic ethics. *Econ. Philos.*, 11: 85-112.
- Epstein, E.M., 1977. The social role of business enterprise in Britain: An American perspective. Part II. *J. Manage. Stud.*, 14: 281-316.
- European Commission, 2001. Promoting a European framework for corporate social responsibility. European Commission. <http://www.social-protection.org/gimi/gess/RessShowRessource.do?ressourceId=33473>.
- Harrison, J.S. and R.E. Freeman, 1999. Stakeholders, social responsibility and performance: Empirical evidence and theoretical perspectives. *Acad. Manage. Rev.*, 24: 479-485.
- Marsh, D. and G. Locksley, 1983. Capital in Britain: Its structural power and influence over policy. *West Eur. Politics*, 6: 36-60.
- Votaw, D., 1975. Genius Becomes Rare. In: *The Corporate Dilemma: Traditional Values Versus and Contemporary Problems*. Edited by D. and S. Sethi (Eds.). Prentice-Hall Inc., Englewood Cliffs, NJ., USA.