An Empirical Study on the Equity Nature, Ownership Structure and Corporate Performance of Mixed Ownership Enterprises
—Based on the Mixed Ownership Enterprises in Competitive Industries

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ABSTRACT

This article uses the cross-section data of 1468 listed companies collected on the CSMR database in 2020. It uses STATA15 software with OLS model to conduct empirical research findings: In the field of competition, the performance of mixed-ownership enterprises which are controlled by state-owned capital is lower than mixed-ownership enterprises which are controlled by private capital. In addition, with regard to the analysis of the shareholding structure of private-controlled mixed-ownership enterprises, we find that the ownership structure of the private party as the largest shareholder has a significant positive correlation with corporate performance. However, the proportion of state-owned shares does not have negative harm on the corporate performance of the private-controlled mixed-ownership enterprises. Regarding the new round of mixed-ownership reform in the competitive industry, state-owned capital should carefully consider a comprehensive strategy giving up a controlling position. That means state-owned capital could extensively integrate with private capital to build private-controlled mixed-ownership enterprises, and they could share the results of private capital management capabilities and inject capital vitality into the private economy in the competitive area. Therefore, in the area of general competition, state-owned shares could transfer corporate control rights, retreat for progress, and participate in the reform of mixed-ownership enterprises to make themselves bigger and optimize resource allocation.

Keywords: *Competitive area, equity nature, mixed-ownership enterprises controlled by state-owned capital, mixed-ownership enterprises controlled by private capital, corporate performance, ownership structure*

1. INTRODUCTION

Mixed ownership is the main pattern of realization of the new round of state-owned enterprise property rights reform. The 17th National Congress of the Communist Party of China pointed out that "based on the modern property rights system, develop a mixed-ownership economy." The 18th National Congress of the Communist Party of China confirmed (November 28, 2012) the establishment of the reform direction for the progress of a mixed-ownership economic system, so mixed-ownership as the main direction of the new turn of state-owned property rights reform, in essence, is a deeper continuation of China's long-term reform of the property rights economy. The Third Plenary Session of the 18th Central Committee (November 9, 2013) put forward new requirements for a new session of mixed reform. The new round of state-owned property rights reform clearly pointed out that it should be classified and regulated, and liberalized competitive industries. So far, the state-owned capital of competitive industries has become the focus of mixed-ownership reform. State-owned enterprises have effectively improved their operation and vitality through the path of "grasping the big and letting go of the small" and establishing a modern enterprise system of property rights reform.

However, the large state-owned property still has the problem of single property rights and dominance of the enterprises. By the end of 2020, the share of shareholders of state-owned listed companies in a controlling position still accounted for more than 50%. The "corporatization" of state-owned enterprises is not the best choice for property rights reform. [1] It is necessary to classify further and supervise the implementation of deeper mixed-ownership reforms.

Mixed ownership is a mutual ownership structure arrangement of state-owned capital and private-owned capital in the fusion of different property rights. [2]According to the percentage of state-owned and private-owned shares, mixed-ownership enterprises' virtual controller is state-owned capital or private capital. It is necessary for state-owned capital to maintain an absolute controlling place in important industries and key areas such as the national economy and people's livelihood. On the contrary State-owned shares in competitive fields should give up their controlling position and take the form of relative control positions. [3]

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. Literature summary

2.1.1. The relationship between the nature of controlling shareholders and corporate performance

Guo Yuejin and Xu Bing (2005) empirically analyze the impact of the combined ratio of state-owned capital and private-owned capital in mixed-ownership companies on corporate performance. They find that the performance of private-owned capital as the largest shareholder is significantly higher than that of companies with state-owned capital as the controlling shareholder. If the mixed--enterprise is controlled by state-owned capital, the better the performance of the enterprise will be better with the help of the higher proportion of private capital. Zhang Liyan and An Weidong (2015) believe that based on the empirical analysis of listed companies in the retail industry, the performance of state-owned shareholding companies is significantly lower than that of private companies. Liu Haiyu (2018) selects mixed-ownership enterprises on the SME board as a data sample. Through empirical analysis, he finds that the performance of mixed-ownership enterprises whose actual controller is the government is poor, indicating that state-owned equity is relatively inefficient. Yang Jijun (2010) finds that the behaviour of control rights from state-owned shares to private companies has effectively improved enterprise's performance significantly. But if the control rights transfer is between the state-owned and state-owned companies, the performance of the enterprises transferred between parties has not improved considerably.

2.1.2. The relationship between stock ownership concentration and corporate performance

Du Ying and Liu Liguo (2002) point out that based on the empirical study of listed company's equity structure on company performance, the concentration of state stocks has negatively correlated with company efficiency. Li Xue (2011) concludes that the proportion of state-owned capital has a positively correlation with corporate performance. Chen Xiaoyue and Xu Xiaodong (2001) analyse the empirical research of listed companies and believe that the concentration of the largest shareholder's equity positively correlates with company performance. Through empirical analysis, Liao Hongwei and Zhang Nan (2016) believe that the current mixed-ownership reforms in China with a high degree of equity concentration should continue to reduce the proportion of state-owned shares. Xu Fengju (2018) concludes that the concentration of state-owned equity affects their performance.

2.2. Hypothesis proposed

Hypothesis 1: The performance of mixed-ownership enterprises controlled by state-owned capital is lower than those controlled by private capital.

Hypothesis 2: The concentration of equity of the largest shareholder (private party) in mixed-ownership enterprises controlled by private capital positively correlates with corporate performance.

Hypothesis 3: There is no negative correlation between the proportion of state-owned shareholders and corporate performance in mixed-ownership enterprises controlled by private shares.

3. EMPIRICAL RESEARCH

3.1. Data selection

According to the industry classification standards promulgated by the China Securities Regulatory Commission in 2012, this paper selects a sample of listed companies in the competitive field in 2020. Based on the particularity of the industry, we eliminate the listed companies in the financial industry, the real estate companies with solid monopolies, the production and supply companies of water, electricity, and gas, and the data of ST companies. In addition, corporate data with missing data are also eliminated in turn. [4] The data in this article comes from CSMAR. We have observed the relationship between different forms of mixed ownership system and corporate performance using

STATA15 to perform descriptive analysis and regression analysis.

By the above principles, 1,468 listed companies with mixed-ownership are selected in 2020 in the stock markets of Shanghai and Shenzhen.

Table 1. Sample classification

Subsample	Classification standard	Number of samples
Type (1)	Mixed-ownership enterprises controlled by state-owned capital	739
Type (2)	Mixed-ownership enterprises controlled by private capital	729

3.2. Variable description

The relationship between the nature of controlling shareholders and corporate performance: This paper uses ROA reflecting accounting profit and Tobin's Q value reflecting corporate value to measure the profitability of the company's corporate performance and market performance ability. ROA=net profit/total assets; Tobin Q=total market value of stocks at the end of the year/total book assets at the end of the year.

In terms of explanatory variables: This article sets the dummy variable MIX according to the nature of the actual controller. MIX=1 means that the actual controller is a state-owned party, and MIX=0 means that the virtual controller is a private party.

3.3. Empirical model

$$Performance=\alpha+\beta1MIX+\beta2sale+\beta3asset+\beta4staff+\beta5industryshare+\beta6lev+\varepsilon \quad (1)$$

As shown in the empirical results in Table 3, after adding the control variables, the ROA of type (1) is about 1.4% lower than type (2) and significant at the 1%. The Tobin Q value of type (1) is about 0.9% lower than

In terms of control variables: This paper adds the scale of assets (assets), the number of employees (staff), sales (sales) of the company's industry market (industry share), and the asset-liability ratio (lev) as control variables in the regression. The market size of the enterprise industry = enterprise sales/industry sales, and the asset-liability ratio = the amount of enterprise debt/the amount of enterprise assets.

As shown in Table 2, in the descriptive statistical analysis, the sample of type (1) is 739, and type (2) is 729. The mean ROA and Tobin Q of type (1) are significantly lower than the mean ROA and Tobin Q of type (2) at the 1%. Therefore, from descriptive statistics, we can see that the average ROA (performance) and average Tobin's Q (market performance) of mixed-ownership enterprises controlled by the state-owned capital are significantly lower than those controlled by private capital.

Table 2 Descriptive statistics of some variable

Variable / Subsample		ROA (%)	Tobin Q	Asset (100mio yuan)	Staff (1000 persons)	Industry Share (%)	Lev (%)	Sales (100mio yuan)
Type (1)	Ɛ	4.07	1.66	176	10.84	0.92	37.45	80.98
	Y	5.49	1.73	794	33.51	4.10	21.81	547.95
Type (2)	Ɛ	5.63	2.37	58	4.62	0.45	31.51	23.99
	Y	5.87	1.84	99	8.48	2.94	17.96	81.27
t-test		-5.41*** (0.00)	-7.62*** (0.00)	4.04*** (0.00)	4.92*** (0.00)	2.88*** (0.004)	5.55*** (0.00)	5.19*** (0.00)

Note: ***, **, * indicate the significance level of 1%, 5%, and 10% respectively, Ɛ=average value, Y= Std.err.

In addition, the average of the assets (asset), and employees (staff), and sales of enterprises (industrial share), and debt-to-asset ratio (lev) of state-owned companies of type (1) is significantly higher than type (2) at 1%. It shows that the asset scale, number of employees, sales volume, industrial scale, and debt ratio

of mixed-ownership enterprises controlled by state-owned capital are generally larger, because they have to consider social goals and other policy burdens.

type (2) and significant at the 1%.

Other variables: The company's sales and the number of employees positively correlate with ROA and Tobin Q, and the results are significant at the level of not less than 5%. Total assets and debt-to-asset ratio negatively correlate with a corporate performance at 1%, and the industry scale is not significant.

The model verifies Hypothesis 1：The performance

of mixed-ownership enterprises controlled by state-owned capital of type (1) is lower than those controlled by private capital of type (2). The performance of mixed-ownership enterprises controlled by state-owned capital is lower in profitability and market performance than those controlled by private capital. The mixed-ownership enterprises controlled by state-owned shares cannot improve the criticism of low performance and internal governance due to the high concentration of state-owned shares. [5]

Table 3 Empirical analysis results

Variable	ROA	Tobin's Q
MIX	-1.402606*** (0.000)	-0.898*** (0.000)
Sale	0.0000244** (0.048)	0.0000137*** (0.001)
Asset	-0.0000244** (0.018)	-8.02e-06** (0.021)
Staff	0.0000273** (0.014)	-7.20e-06* (0.053)
Industry share	0.0330143 (0.529)	-0.0259029 (0.140)
Lev	-0.0813364*** (0.000)	-0.0254*** (0.000)
Industry	control	control
R^2	0.1028	0.1588
N	1468	1468
F	16.88	27.80

Note: ***, **, * indicate the significance level of 1%, 5%, and 10% respectively.

In addition, this article also wants to explore the effect of the shareholding structure of type (2) on corporate performance. Therefore, a model is constructed based on sub-samples of type (2) for hypothesis testing.

$$Performance=\alpha+\beta1privateshare+\beta2nation'share+\beta3sale+\beta4asset+\beta5staff+\beta6industryshare+\beta7lev+\varepsilon \quad (2)$$

As shown in Table 4, in the mixed-ownership enterprises controlled by private capital, the concentration of the largest shareholder positively correlates with ROA and Tobin Q value at 1%. It verifies Hypothesis 2：The concentration of equity of the largest shareholder (private party) in mixed-ownership enterprises controlled by private capital positively correlates with corporate performance. Because the largest shareholder of this type of enterprise is a private shareholder, the higher concentration of equity increases the enterprise's profitability. The enterprise can adjust the enterprise scale and asset-liability ratio more flexibly. [6] They are good at controlling corporate financial expenses, increasing corporate profitability, and having a better performance in the capital market.

In addition, we also need to note whether the proportion of state-owned shares in the mixed-ownership enterprises controlled by private capital correlates with corporate performance to test hypothesis 3. Because the ultimate controller of the enterprise is the private shareholders, so the private party has more decision-making power in the operation of the enterprise. [7]On the other hand, state-owned shares are in a non-controlling position. The establishment of such equity institutions can reduce the negative impact of state-owned shares on corporate performance. Thus, state-owned shares have no negative impact on enterprises. Therefore, hypothesis 3 is verified.

Table 4 Empirical test results

Variable	ROA	Tobin's Q
(Private share) First-holder' share	0.053865*** (0.001)	0.015709*** (0.001)
Nation's share	0.0583812 (0.175)	0.0111021 (0.386)
Sale	0.0001177*** (0.005)	0.0000504*** (0.000)
Asset	-0.0000854** (0.044)	-.0000549*** (0.000)
Staff	0.0000998*** (0.005)	2.06e-06 (0.846)
Industry share	0.0069459 (0.954)	-0.0243863 (0.498)
Lev	-0.0848566*** (0.000)	-0.031046*** (0.000)
Industry	control	control
R^2	0.2163	0.1320
N	729	729
F	10.27	5.66

Note: ***, **, * indicate the significance level of 1%, 5%, and 10% respectively.

4. CONCLUSIONS

In the new wave of mixed-ownership reform, building mixed-ownership enterprises have achieved outstanding results, has effectively solved the problem of low corporate performance. In terms of market performance (Tobin Q), mixed-ownership enterprises controlled by private capital are significantly higher than those controlled by state-owned capital. In addition, in terms of profitability (ROA), mixed-ownership enterprises controlled by private capital are higher than those controlled by state-owned capital. In addition, the performance of mixed-ownership enterprises controlled by private capital positively correlates with the concentration of the first shareholder. Still, it has no significant negative correlation with the proportion of state-owned shares. China's state-owned capital has a relatively large stock of assets in the field of competition, and the reform of state-owned equity division has solved the problem of the freezing of non-tradable shares of enterprises. Therefore, in the area of competition, state-owned shares should gradually give up the control of enterprises, but this does not mean withdrawal, but a shift to a mixed-ownership reform combined with private capital. It can solve the financing problem of private shareholders, increase the value of state-owned capital and improve the performance of mixed-ownership enterprises.

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