An Empirical Study on the Relation between the Management Shareholding and Company Performance based on the Theory of Ultimate Property Right

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Abstract. This paper studies the relation between the management shareholding of non-financial state-owned listing companies in China and company performance, based on the views of Liu Shaojia and et al. (2003) on the ultimate property right theory. The empirical study results demonstrate the existence of a positive correlation between the management shareholding and company performance. This correlation becomes more apparent in the companies under governmental indirect holding than those under governmental direct holding. This paper further finds out that in the non-financial state-owned listing companies, there is a significant positive correlation between the company performance and the share proportion of the largest shareholder.

Introduction

Regarding the relation between the management ownership and company performance, there are nine theories in the academic circles, among which, the Theory of Incentive Compatibility (Jensen and Meckling, 1976; Leland and Pyle, 1977) and the Theory of Entrenchment (Fama, Jensen, 1983; DeTinsetz, 1983; Stulz, 1988; Morck et al., 1988; Denisetal, 1994) [1] are accepted by most scholars. Apart from the two theories, some scholars hold the view that there presents not merely a linear relation between the management shareholding and company performance (Morck, Shleife and Vishny, 1997; McConnell and Servaes, 1990; Hermalin and Weisbach, 1991; Cui and Mak, 2002) [2], to-wit, there exists an interval effect – the effect of incentive compatibility and entrenchment should appear alternatively with the increasing ratio of management shareholding. However, there is no uniform view on the relation between management shareholding and company performance.

By summarizing the research results of scholars, it seems that the conclusions on the relation between management shareholding and company performance vary with each other, and a convincing uniform conclusion has not been formed yet. Actually, it comes down to the following reasons: (1) Inconformity in selection of data and statistics approach; (2) Deviation in the index measure of company performance; (3) Deficiency of distinction and classified study on the listing companies of different natures; (4) Considerable difference as a result of different national systems and external environments. Firstly, a scholar may have different understandings on the proposition research for his/her own reasons and may employ a
different research method and test indexes for different research purposes. Secondly, it is impossible to apply a uniform standard to analyze this proposition under different national systems, especially under the countries with different law systems. Therefore, this paper takes the state-owned listing companies in China only as the sample for research, and applies the theory of ultimate property right to study the relation between the management shareholding and company performance, from the perspective of the deficiency as described in the point three. In this paper, those non-financial state-owned listing companies in China during 2011~2013 are selected as the study sample, indexes are selected from correlation between management shareholding and company performance, and the multiple regression analysis method is applied to empirically test the correlation of the two.

Theoretical Analysis and Hypothesis

Hart et al. hold that the contract is incomplete owing to the existence of transaction cost. It is not likely to make detailed and feasible provisions for all contingent events and countermeasures in the initial contract, so there must be someone who owns the “residual control right”, enabling him to play a positive and protective role for special investment inside the company. It is the management, because of the particularity of its function, which “naturally” owns the certain control right over the company. If the management does not own shares and hence is not entitled to the residual claim right, it could induce the management to become indolent in duty and speculate on personal gain. To solve the principal-agent problems, a property right contract that matches with the nature of agency contract must be worked out to bind the commitments in the agency contract through the allocation of residual claim right, with the precondition that the incompleteness of the contract must be recognized. After the management holds shares, its interest will be linked to the interest of the listing company more closely, and the management would pursue for the maximization of enterprise value in a stronger way, instead of pursuing for the growth of enterprise only. At this point, the management will straighten up the excessive investment and asymmetric information of investment projects in the financing market, improve the financing conditions and mitigate the investment deficiency of the enterprise. In all cases the listing company’s investment will be improved, and its performance will be further developed. The empirical research results of Steiner, Thomas and Lorenz (1996) and Cho (1998) [3] also show that the management shareholding can affect the company’s decisions and then values. To sum up, the first hypothesis comes out:

Hypothesis 1: The ratio of management shareholding is directly proportional to the company performance.

There are apparent differences on the generation of principal-agent problems, ways of solution and ownership exercise among shareholders at different levels. This would further exert different impacts on the company performance. The existing empirical evidences indicate that the relation between the equity structure and company performance is restricted by the equity nature of majority shareholders or the status of equity holders (Denis and Mc Connell, 1990) [4]. Since the equity of listing companies in China is considerably high, the control right over the company is indeed held by the largest shareholder whose status and shareholding ratio have different impact on the company performance. According to the researches of Cai Jipu and Chen Min (2005) [5], Shao Yiping and Xu Xiao (2016) [6], the
ownership nature of listing companies have significant influence on the management shareholding, the ratio of management shareholding in the state-owned companies is noticeably lower than that in the non-state-owned companies, and the number of state-owned companies where the management holds no shares is more than that of non-state-owned companies. This paper classifies all listing companies into two categories by reference to the methodology of Liu Shaojia (2003): taking the state as the ultimate controlling shareholder and non-state-owned ultimate controlling shareholder, and classifying the state direct controlling mode and state indirect controlling mode for listing companies in which the state is an ultimate controlling shareholder. To be specific, the direct controlling mode is confirmed when the government holds more than 20% of voting rights through the departments under its direct control, while the indirect controlling mode is confirmed when the government exercises the voting right through the company owned by it or under its control. It turns out that the extent of marketization of management of listing companies under the state direct controlling mode falls behind that of listing companies under the state indirect controlling mode. Based on this point, we can confer the hypothesis below:

Hypothesis 2: for a listing company under the state direct control, there is no correlation between the management shareholding and company performance.

Hypothesis 3: for a listing company under the state indirect control, there is a positive correlation between the management shareholding and company performance.

Study Design

Sample Selection and Data Source

The sample data to be studied in the paper come from the spatial database that is formed on the basis of annual statements of listing companies provided by csmar database, and includes all non-financial state-owned listing companies with complete financial data from 2011 to 2013. Those listing companies without disclosure about the shareholding of senior managers as required (or without disclosure about the titles of senior managers, although their shareholding ratios have been disclosed), and PT or ST listing companies are deleted from the study sample, since they are out of the normal range of study for their abnormal financial position. There are, finally, 526 sample companies after such deletion, including 135 ones under governmental indirect control and 391 ones under direct control.

Selection of Variables

1. Company performance. In order to reveal the company performance information accurately as much as possible, the Rate of Return on Common Stock Holders’ Equity (ROE) is used to measure the company’s operation performance, by reference to Liu Shaojia (2003), Yang Zhongcheng (2008) [7] and others.

2. Ratio of management shareholding. This paper refers to the method of Xiao Zuoping and Zhang Ying (2016) [8] to take the operator’s shareholding ratio (EOWN) as the index for study. EOWN = Sum of shares held by operator (including the member of boards of directors and supervisors, board secretary and managers) / total stock capital of the company ×100%.

3. Equity concentration. According to the research conclusions of Feng Fugen (2001) [9], there exists an apparent relation between the company performance and equity concentration.
Given this, the sum of shareholding ratio of the largest shareholder and top ten shareholders – the two equity concentrations – are taken as the index for survey in this paper, by reference to Chen Deping and Chen Yongsheng (2011).

4. Whether the listing company is under direct control or not. This index is a controlling variable for measurement based on the criterion that whether the government controls 20% of the company shares. As described above, it is direct control when the governmental shareholding exceeds 20%, otherwise it is indirect control.

5. Company size. The natural logarithm of total assets at the end of period, which is used by most scholars in research, is introduced in the paper and taken as the substitution variable for company size.

**Empirical Analysis**

**Descriptive Statistics and Correlation Analysis**

The overall level of shareholding ratio of senior managers in the state-owned listing companies in China is comparatively low at 0.0319% in average only, in which the shareholding ratio per capita of senior managers in the companies under governmental indirect control is 0.0295%, while that under direct control is 0.0342%. Their correlation is analyzed by calculating the Pearson coefficient of management shareholding, ROE and other variables. It can be known through analysis of statistics software that the correlation coefficient between the management shareholding and ROE is 0.012, rending a weak positive correlation, i.e. there exists a positive correlation between the management shareholding and ROE. In term of economic significance, it is much beneficial to the growth of company performance when the management shareholding is higher, but the effect is not considerable. Moreover, the ROE renders a positive correlation with the shareholding ratio of top ten shareholders and with the company size, being 0.057 and -0.013 respectively, which supports our hypothesis 1 to some extent. The analytical result of Pearson correlation shows that the ROE is correlative with the management shareholding, so it is with the company size and equity concentration. The next step is to apply the regression analysis to further define the extent of correlation under the circumstance whether the company is under the state direct control.

**Multiple Linear Regression Analysis**

The regression analysis of management shareholding and ROE is based on the size of control companies and nature of control shareholders, with a view to analyzing the influence of management shareholding on the company performance under different control modes. After using the SPSS software for regression, the paper gets the following results: the management shareholding and company performance present a positive correlation that verifies the hypothesis 1 to some extent. Furthermore, the goodness of fit is 0.054 and 0.025 respectively under the circumstances of governmental direct control and governmental indirect control, proving that these factors are not sufficient to indicate the ROE. And the $R^2$ (0.054) under direct control is obviously lower than the $R^2$ (0.225) under indirect control. This shows that the relation between the management shareholding ratio and company performance under
governmental direct control is not apparent and greatly lower than that under governmental indirect control, which verifies our hypothesis 2 and hypothesis 3.

Conclusions and Shortcomings

Current Situation about the Management Shareholding and Company Performance and Influencing Factors

In the sample companies, the management shareholding ratio in the listing companies is very low and even the majority holds “zero shares”, and the number of companies under governmental direct control is far beyond that under governmental indirect control. It thus can be seen that the policy of stock ownership incentive has not been widely used in the state-owned listing companies in China, especially those under governmental direct control. At present, the compensation incentive still prevails for the management in China. However, our data indicate that the shareholding can still motivate the senior managers to raise the company performance, even if the shareholding ratio is not high, which should be affirmed. For this article, an enhancement in the operator’s equity incentive can bring an increase in the company performance, but this method should be utilized in a sound way when the equity incentive plan is being formulated. It should not be popularized blindly and jump to conclusions for other enterprises or industries.

Influencing Factors to Company Performance

There is certainly a correlation between the shareholding ratio of senior managers and the company performance, but there will not be a positive answer in our study, since the management shareholding ratio in the state-owned listing companies in China is generally low. The paper further finds out that under the governmental indirect control, there exists a positive correlation between the company performance and equity concentration – the shareholding ratio of the largest shareholder. This indicates that in the state-owned listing companies, it is more beneficial to the growth of company performance when the governmental shareholding ratio is higher, which becomes more apparent under governmental direct control. Notwithstanding the above, those companies with high governmental shareholding ratio are running the monopoly industries and all of them are large state-owned enterprises, as a matter of fact. Therefore, the super profit earned from the monopoly industries is also one of the root causes for their performance higher than other counterparts. This point is not explored in our study. Compared with researches by other scholars, our study follows the theory of ultimate property right, pays consideration to the relation between company performance and management shareholding ratio under different control modes, and enriches the contents for studying the management shareholding in the state-owned listing companies. However, although some major factors have been taken into account in the selection of explaining variables and controlling variables, there are still some controlling variables with explanatory effect, such as type of industry, that have not been incorporated into the analytical contents. It is generally known that there are certain differences on the management effect, form and intensity of effect of equity in different industries, so there is no discussion about specific industry in the paper, which has certain effect on the study result. Moreover, this paper does nothing with the number of shareholding ratio of senior managers in the state-owned listing companies for realizing the maximum effect of equity incentive, due to the limited research ability of authors.
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Appendix

1. This paper provides phasic research results for scientific research subjects (2013Y402) of Yunnan Department of Education. Corresponding Authors: Li Fei, Weng Wei.

2. The nine theories are: incentive compatibility, entrenchment, capital cost, acquisition premium, combination, return, insider return, insider investment and natural selection.


References


