Equity Structure, Internal Control and Corporate Financial Performance—Empirical Research Based on Listed Companies in Manufacturing

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Abstract. Taking China's 2015-2017 A-share listed companies in Shanghai and Shenzhen as a research sample, using the research method of intermediary variables, empirical analysis of the mediation effect of equity structure affecting internal control and ultimately on corporate financial performance. The regression results show that internal control plays a partial mediating effect on the impact of equity concentration, equity balance and equity nature on financial performance, but the mediating effect between equity nature and corporate financial performance is weak, that is, reasonable shareholding structure can promote the improvement of the internal control level of the enterprise, thereby improving the financial performance of the enterprise.

Introduction

The shareholding structure is the basis of corporate governance. Different equity structures will lead to different corporate governance efficiencies and will ultimately be reflected in the company's financial performance. At present, the research on ownership structure and corporate financial performance mainly focuses on the nature of equity, equity concentration, and equity balance. In terms of equity concentration, Liu Xing et al. (2007) found that due to the positive concentration of equity concentration, the company's performance was significantly positively correlated. Fan et al. (2002) and Chang Lijuan et al. (2015) considered that the concentration of ownership was significantly negatively correlated with corporate performance, and the over-centralized ownership structure had an inhibitory effect on performance improvement. In terms of equity checks and balances, Bennedson et al. (2000) and Li Xuewei et al. (2007) pointed out that multiple major shareholders can effectively restrain the controlling shareholders' interests in minority shareholders. However, studies by Armando et al. (2001) and Xu Liping et al. (2006) suggest that equity checks and balances may have adverse effects. In terms of the nature of equity, Jensen et al. (1976) and Morck et al. (1988) showed that the proportion of internal shareholdings and corporate value was positively correlated within a certain range and negatively correlated after reaching the critical point.

As the basis of corporate governance structure, there are many research results in the existing literature on the relationship between corporate governance and internal control. Foreign scholars generally combine equity structure with internal control to conduct research. Domestic scholars on equity structure and internal control The research results of the relationship are quite fruitful. The results of Deumes et al. (2008) and Wu Yibing et al. (2009) show that equity concentration is not conducive to the improvement of internal control quality. However, Li Yuhong (2011) found that the higher the concentration of controlling shareholders, the convergence of interests with enterprises, and the concentration of ownership is affecting the effectiveness of internal control.

For the study of the relationship between internal control and corporate performance, domestic and foreign scholars have conducted research on the quality of internal control. Lin Zhonggao et al. (2007), Dawn et al. (2014) show the internal control quality and corporate value of listed companies in China. There is a positive correlation between performance and so on. However, Liu et al. (2014) discussed the impact of internal control quality on corporate performance from the perspective of
enterprise life cycle, and pointed out that the impact of internal control quality on firm performance is not significant.

Looking back at the existing literature, the current research results on the relationship between ownership structure, internal control and corporate financial performance are rich, but no unified research conclusions have been formed. A few domestic scholars only studied the relationship between ownership structure, internal control and corporate financial performance, while the ownership structure is extensive, the internal control measures are different, and the research conclusions are different. Therefore, based on the existing research, this paper attempts to further study the relationship between ownership structure, internal control and corporate financial performance based on the research method of intermediary variables.

**Research Design**

**Sample Selection and Data Source**

In this study, the listed companies of A-share manufacturing in Shanghai and Shenzhen stock exchanges from 2015 to 2017 were selected as research samples, and the ST, ST* and PT companies and the financial data disclosure in the past three years were incomplete or abnormal data have finally obtained effective observations of 1,422. The internal control data in this study was obtained from the DIB internal control and risk management database, and other data were from the CSMAR.

**Definition of variables**

| Variables               | Index | Variables description                                      |
|-------------------------|-------|-----------------------------------------------------------|
| Internal Control        | ICI   | DIB internal control index                                 |
| Equity concentration    | OC    | The shareholding ratio of the largest shareholder          |
|                         |       | The ratio of the shareholding ratio of the second largest |
|                         |       | shareholder and the shareholding ratio of the fifth       |
|                         |       | largest shareholder                                        |
| Equity balance          | DR    | Divided into state-owned enterprises and non-state-owned  |
|                         |       | enterprises                                              |
| Equity nature           | SOE   | Divided into state-owned enterprises and non-state-owned  |
|                         |       | enterprises                                              |
| Financial Performance   | ROA   | Return on Assets                                          |
| Business scale          | SIZE  | Natural logarithm of total assets                         |
| Financial leverage      | TDR   | Assets and liabilities                                     |
| Asset operation efficiency | TURN | Total asset turnover                                      |
| Business growth         | GROWTH| Operating income growth rate                               |

**Model Building**

Based on the combing of the existing literature, based on the previous research results, this paper constructs the following model for empirical research. In order to test the impact of the shareholding structure on the financial performance of the company, a model 1:

\[ R_{OA_i} = \beta_0 + \beta_1 OC_{i1} + \beta_2 DR_{i1} + \beta_3 SOE_{i1} + \beta_4 SIZE_{i1} + \beta_5 TDR_{i1} + \beta_6 TURN_{i1} + \beta_7 GROWTH_{i1} + \varepsilon \]

In order to test the impact of ownership structure on the internal control of intermediary variables, model 2 is constructed:

\[ ICI_{i1} = \beta_0 + \beta_1 OC_{i1} + \beta_2 DR_{i1} + \beta_3 SOE_{i1} + \beta_4 SIZE_{i1} + \beta_5 TDR_{i1} + \beta_6 TURN_{i1} + \beta_7 GROWTH_{i1} + \varepsilon \]

Introduce internal control of intermediary variables, test the relationship between ownership structure, internal control and corporate financial performance, and build model3:

\[ R_{OA_i} = \beta_0 + \beta_1 ICI_{i1} + \beta_2 OC_{i1} + \beta_3 DR_{i1} + \beta_4 SOE_{i1} + \beta_5 SIZE_{i1} + \beta_6 TDR_{i1} + \beta_7 TURN_{i1} + \beta_8 GROWTH_{i1} + \varepsilon \]
Empirical Results

Table 2. Descriptive statistics.

| Variable | Mean     | Std. Dev. | Min    | Max    |
|----------|----------|-----------|--------|--------|
| ROA      | 0.0375625| 0.0617404 | -0.685 | 0.4694 |
| ICI      | 619.2966 | 155.7055  | 0      | 889.8  |
| OC       | 0.32094  | 0.1373205 | 0.033904 | 0.899858 |
| DR       | 0.1396934| 0.1025639 | 0.0027 | 0.8099 |
| SOE      | 0.3284107| 0.4696901 | 0      | 1      |
| SIZE     | 22.23762 | 1.15752   | 17.6413 | 27.3074 |
| TDR      | 0.4091552| 0.2000596 | 0.012  | 3.2619 |
| TURN     | 0.6286405| 0.4327798 | 0.0044 | 7.78796 |
| GROWTH   | 0.3220189| 2.306691  | -0.918341 | 82.69918 |

As can be seen from Table 2, the minimum financial performance is -0.6850, the maximum value is 0.4694, the average value is 0.0376, and the standard deviation is 0.0617, indicating that the sample company's overall financial performance is average. The internal control index has a minimum value of 0.0000, a maximum value of 889.8000, an average of 619.2966, and a standard deviation of 155.7055. Overall, there is a large gap in the internal control index of sample companies of different sizes in the manufacturing industry, and the internal control of listed companies in China's manufacturing industry. There is still a large room for improvement in the level. The minimum concentration of equity concentration is 0.0339, the maximum value is 0.8999, the average value is 0.3209, and the standard deviation is 0.1373, indicating that there is still a big phenomenon in the listed companies in China's manufacturing industry. The minimum value of equity balance is 0.0027, the maximum value is 0.8099, and the average value is 0.1397. Overall, China's manufacturing listed companies have weak equity checks and balances. The average value of the nature of equity is 0.3284, indicating that about 32.84% of the listed companies in China's manufacturing industry are state-owned enterprises. The minimum size of the company is 17.60413, the maximum value is 27.3074, and the standard deviation is 1.1575, indicating that the sample company has certain differences in the size of the company. The average asset-liability ratio is 0.4346, indicating that the average debt level of listed companies in the manufacturing sector is moderate. The total asset turnover rate is very small at 0.0044, the maximum value is 7.7880, and the standard deviation is 0.4328, indicating that there is a large gap in the efficiency of asset utilization among listed companies in the manufacturing industry. The minimum growth rate of operating income is -0.9183, the maximum value is 82.6992, and the standard deviation is 2.3067, indicating that listed companies in manufacturing may have large differences in corporate growth due to the different industry cycles of their sub-sectors.

Table 3. Estimated results.

|               | Model 1          | Model 2          | Model 3          |
|---------------|------------------|------------------|------------------|
|               | Coef. | t      | P>t  | Coef. | t      | P>t  | Coef. | t      | P>t  |
| ICI           | 0.0000754       | 8.09             | 0.000            |
| OC            | 0.0773678       | 3.95             | 0.000            | 176.11 | 3.31  | 0.001 | 0.064094 | 3.41  | 0.001 |
| DR            | -0.0700885      | -2.69            | 0.007            | -209.0749 | -3.01  | 0.003 | -0.05433 | -2.16  | 0.031 |
| SOE           | -0.0138683      | -7.63            | 0.000            | -20.32944 | -3.8  | 0.000 | -0.012336 | -6.96  | 0.000 |
| SIZE          | 0.016754        | 14.49            | 0.000            | 37.8453  | 14.49  | 0.000 | 0.0139015 | 12.71  | 0.000 |
| TDR           | -0.1478601      | -18.33           | 0.000            | -204.0739 | -12.08 | 0.000 | -0.1324786 | -16.24 | 0.000 |
| TURN          | 0.0338696       | 8.42             | 0.000            | 56.5977  | 7.34   | 0.000 | 0.0296037 | 7.97   | 0.000 |
| GROWTH        | 0.0016835       | 3.17             | 0.002            | -2.000384 | -1.25  | 0.212 | 0.0018343 | 3.09   | 0.002 |
| CONS          | -0.3068275      | -12.48           | 0.000            | -194.3683 | -3.42  | 0.001 | -0.2921774 | -12.46 | 0.000 |
| R-squared     | 0.2637          | 0.1089           | 0.2959           |
| F             | F(7,4258)=70.19 | F(7,4258)=42.87  | F(7,4258)=66.75  |
| Prob > F      | 0.00000         | 0.00000          | 0.00000          |
It can be seen from the above table that the adjusted R square is 0.2637, and the p value is 0.0000 in the F test, indicating that the model 1 is significant, the regression equation fits well, and is statistically significant; the equity concentration OC is at the 1% significance level. Significantly positively correlated with corporate financial performance ROA. The equity balance degree DR is negatively correlated with the financial performance ROA of the enterprise under the 1% significance level. The equity nature SOE is negatively correlated with the corporate financial performance ROA at the 1% significance level.

It can be seen from the above table that the adjusted R square is 0.1089, and the p value is 0.0000 in the F test, indicating that the model 2 is significant, the regression equation fits in general, and is statistically significant; the equity concentration OC is at the 1% significance level. The internal control index ICI is significantly positively correlated. The equity balance degree DR was negatively correlated with the internal control index ICI at the 1% significance level. The equity nature SOE and the internal control index ICI were negatively correlated at the 1% significance level.

It can be seen from the above table that the adjusted R square is 0.2959, and the p value is 0.0000 in the F test, indicating that the model 3 is significant, the regression equation fits well, and has statistical significance. After adding the internal control of the intermediate variable, the internal control index ICI and Financial performance ROA is significantly positively correlated at a level of significance of 1%. The equity concentration OC is significantly positively correlated with the corporate financial performance ROA at a 1% significance level. The equity balance degree DR is negatively correlated with the corporate financial performance ROA under the 10% significance level. The equity nature SOE is negatively correlated with the corporate financial performance ROA under the 10% significance level.

Using the median effect test method proposed by Wen Zhonglin (2014), the mediation effect is tested. From the results of the 3-table test, the regression coefficient of internal control and financial performance as an intermediary is 0.0000754, and the significance test of 1% level is passed, that is, the coefficient c is significant, indicating that the mediation effect of internal control exists. Next, the coefficients a, b and c' are tested according to the inspection procedure of the mediation effect, where a is the regression test coefficient of the equity structure and internal control, and b is the internal control in the regression test that affects the financial performance of the enterprise together with the ownership structure and internal control. Corresponding regression test coefficient, c' is the regression test coefficient corresponding to the independent variable ownership structure in the regression test of the equity structure and internal control that affect the financial performance of the enterprise.

For the OC of equity concentration, it can be seen from the test results in Table 3 that it is significantly positively correlated with the internal control at the level of 1%, and the regression test coefficient a is 176.11. At the same time, the results of Table 3 test show that internal control and corporate financial performance There was a significant positive correlation at the 1% level with a coefficient b of 0.0000754. Therefore, at this time, both a and b are significant, and the next step of the mediation effect test procedure can be started. From the test results in Table 3, it can be known that the equity concentration OC is significantly positively correlated with the financial performance of the enterprise at the level of 1%, and the coefficient c' is 0.064094. At this time, ab and c' have the same number. Therefore, this paper believes that internal control has a partial mediating effect on the concentration of equity and the financial performance of the enterprise. The ratio of the mediating effect to the total effect is calculated by calculating ab/(ab+c'). 17.16%. Similarly, through the above test results, the mediation effect of internal control on the equity balance degree DR and the equity nature SOE in financial performance is calculated. The ratio of the mediating effect to the total effect is 22.49% and 0.17%, respectively.

According to the above test results, internal control has some mediating effects on equity concentration, equity balance and equity nature and corporate financial performance, but the mediating effect between equity nature and corporate financial performance is weak.
Conclusion

The concentration of ownership and the financial performance of the company are significantly positively correlated at the level of 1%, indicating that the increase in the concentration of equity will promote the improvement of corporate financial performance. The balance of equity and the financial performance of the company are significantly negatively correlated at the level of 1%, that is, excessive equity balance will cause loss of financial performance of some enterprises. The nature of equity and the financial performance of the company are significantly negatively correlated at the level of 1%, which means that the financial performance of state-owned enterprises is not good compared with non-state-owned enterprises.

The concentration of ownership is significantly positively correlated with the internal control of listed companies at the level of 1%, indicating that higher concentration of ownership plays a role in promoting the internal control level of listed companies. The balance of equity and the internal control of listed companies are significantly negatively correlated at the level of 1%, that is, excessive equity balance will result in lower internal control. The nature of equity is significantly negatively correlated with the internal control of listed companies at the level of 1%. That is, Chinese companies in manufacturing listed companies show lower levels of internal control than non-state-owned enterprises.

Internal control plays a partial mediating effect between equity concentration, equity balance and equity nature and corporate financial performance, but the mediating effect between equity nature and corporate financial performance is weak, that is, reasonable equity structure can promote enterprise perfection. The level of internal control, which in turn improves corporate financial performance.

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