OWNERSHIP CONCENTRATION OF AGRICULTURAL LISTED COMPANIES AND OPERATING PERFORMANCE ANALYSIS

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Abstract: Our country is a big population country, also it is an agricultural country. Because agriculture is the basic industry and pillar industry in our country, also the development of agricultural is closely related to national economy and people's livelihood, therefore, as the leading enterprises of the agricultural listed companies should be given more attention. As the representative of agricultural enterprises, agricultural listed companies play an important role in the process of agricultural industrialization. But compared with non-agricultural listed companies, the agricultural companies' management benefit is lower than the average level of listed companies. Production activities and management benefit of the agricultural listed companies in our country haven't meet our expectations, also the characteristic of ownership concentration may have an affect on production and management of the listed companies in our country, which in turn affects the corporate performance. So this paper studies the relationship between ownership concentration and the operating performance of the agricultural listed companies. But this kind of research papers are rare, and whether agriculture listed company ownership structure have an impact on operating performance is not clear, so the purpose of this study is that through the empirical analysis to reveal one aspect of our country agriculture listed company ownership structure-the relationship between ownership concentration and operating performance, in order to explore a target model which can optimize the structure of agriculture listed company ownership.

Keywords: Ownership Concentration; Operating Performance; Empirical Analysis

1. Introduction

1.1. Forwarding Hypothesis

Hypothesis 1: CR1 has a positive correlation with the company's operating performance
Hypothesis 2: CR5 has a positive correlation with the company's operating performance
Hypothesis 3: CR10 has a positive correlation with the company's operating performance
According to Principal-Agent Theory, Shareholder's stake is higher who has more power and ability to supervise and manage the company, which will interest synergistic effect, also the company's operating efficiency will increases accordingly. So the ownership concentration has a positive correlation with operating performance.
Hypothesis 4: H10 index has a negative correlation with the company's operating performance
H10 reflects the ownership concentration, but also reflects the ownership distribution whether uniform. The H10 is greater, the difference in are holders holding is greater, also the ownership is more concentrated; the H10 is smaller, the gap between shareholder shareholding is

smaller, also the ownership is more scattered. The H10 is greater, indicating that the top 10 shareholders ownership difference is greater, which is not conducive to multiple subjects playing a role, especially against the dealership competition playing a role.
Hypothesis 5: Z index has a negative correlation with the company's operating performance
Z index reflects the ability of the second largest shareholder checks and balances to the first big shareholder .Z index is greater, the second largest shareholder's ability to balance the first largest shareholder is weaker, the chance of the first big shareholder monopolized power is greater, which is not conducive to multiple subjects playing a role, so Z index has a negative correlation with company's operating performance.
Hypothesis 6: equity restriction ratio has positive correlation with the company's operating performance
Equity restriction ratio is that the sum of second largest shareholder to the fifth largest shareholder's stake divided by the first big shareholder's shareholding ratio. Equity restriction ratio is higher, the second to fifth largest shareholders have greater ability checks and balances to

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the first big shareholder, which is conducive to multiple subjects playing a role, and improving the efficiency of governance

1.2. Process of Obtained Samples

According to the 2014 Listed Companies Industry Classification released by China Securities Regulatory Commission (CSRC) in the 2014, the agriculture will be divided into: agriculture, forestry, animal husbandry, fisheries and Service Industry of forestry and animal husbandry and fishery. According to this standard to collect the data of agricultural listed companies in 2014 on the securities star.

When selecting sample data, the following factors were considered:

(1)Rejecting those agricultural listed companies which are "special treatment" (ST) and "transfer of special" (PT). Because those agricultural listed company's financial situation are unusual, if take those data into the empirical analysis which will influence the reliability of the results.

(2)Rejecting those agricultural listed companies which issued the A share, B share, H share, and shares of listed abroad at the same time. In order to make the data comparable, selecting those agricultural listed companies which only issue A share.

According to those principles of data selection, a total of 37 listed agricultural companies in 2014 are selected, investigation period for a whole year in 2014.

1.3. Definition of Variables

When selecting the indexes of valuing agricultural listed companies' operating performance, foreign literature more select to-bin Q , to-bin Q = company market value/book value. But the company's market value is difficult to determine, so the index is not adopted in this paper. Domestic literature more often using a single measure, such as ROE, ROA, etc., but the company's business performance is not a single indicator can fully reflect, so in this paper, a number of financial indicators are used, and using factor analysis method to calculate the comprehensive indexes scores as an indicator to measure the performance of the company.

Table 1: Definition table of the independent variables

Independent variables	Meaning
CR1	the first largest shareholder's shareholding proportion
CR5	The top five shareholders' shareholding proportion
CR10	The top ten shareholders' shareholding proportion
H10	the sum of squares of the top ten shareholders' shareholding proportion
Z	The ratio of the first largest shareholder's shareholding proportion / the second largest shareholder's shareholding proportion
Equity estrictionration	The ratio of the top four shareholders' shareholding proportion / the first largest shareholder's shareholding proportion

Table 2. The financial indexes which measure agricultural listed companies' operating performance

Indicators category	The index name
Profitability	Return On Assets
	Return On Net Assets
	Gross Profit Rate
	Net Profit Rate
Operational Efficiency	Total Assets Turnover Ratio
	Inventory Turnover
	Accounts Receivable Turnover
Debt paying ability	Current Ratio
	Quick Ratio

On the premise of minimum information loss, factor analysis integrates many of the original variables into less several comprehensive indexes, according to the weight, concluding the comprehensive scores F of agricultural listed companies operating performance, compared with the single index, comprehensive scores is more representative. According to the principles of meaningful, measurable, controllable and practical, selecting the following financial indexes:

A total of 37 listed agricultural companies financial data in 2014 are selected, and the main process of factor analysis are as follows

First of all, the financial indexes which have been extracted have to be tested to see which whether suitable for factor analysis. This paper adopted SPSS KMO and Bartlett Test of Sphericity (Kaiser - Meyer - Olkin) Test, the results are as follows:

Table 3. KMO and B artlett inspection

KMO and Bartlett test

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Kaiser-Meyer-Olkin		560
Bartlett Test of Sphericity	Approximate Chi-square	239.005
	df	28
	Sig.	000

According to the above table, the observed value of Bartlett Test of Sphericity statistics was 239.005. The Sig. value is 0, if significant level is 0.05, because the Sig. is smaller than a, so null hypothesis should be refused. By the above tests, the extracted data suitable for factor analysis.

Table 4. The total variance which have been Explained

Composition	Initial characteristic value			Extract the square and load		
	Figure up	variance%	cumulative%	Figure up	variance%	cumulative %
1	2.786	34.830	34.830	2.786	34.830	34.830
2	2.048	25.605	60.435	2.048	25.605	60.435
3	1.614	20.178	80.613	1.614	20.178	80.613
4	0.856	10.702	91.315	0.856	10.702	91.315
5	0.422	5.276	96.591			
6	0.212	2.645	99.236			
7	0.036	0.444	99.680			
8	0.026	0.320	100.000			

Composition	Initial characteristic value			Rotate the square and load		
	Figure up	variance%	cumulative %	Figure up	variance%	cumulative %
1	2.786	34.830	34.830	2.737	34.209	34.209
2	2.048	25.605	60.435	2.013	25.166	59.375
3	1.614	20.178	80.613	1.555	19.440	78.815
4	.856	10.702	91.315	1.000	12.501	91.315
5	.422	5.276	96.591			
6	.212	2.645	99.236			
7	.036	.444	99.680			
8	.026	.320	100.000			

Table 5. The definition table of control variables

Control variables	Explain
Financial leverage DRA	The book value of the company's debts/The book value of the total assets
Firm Size	Taking company's total assets as the company size Considering to the total assets is greater, so taking natural logarithm of total assets as the company size

According to the above table, % of The cumulative is 91.315% > 85%, shows that 91.315% of the original variable were explained by the extracted four factors, which indicating that information loss is less, so the extracted four factors is more reasonable. Factor variance contribution rate which after rotating are 34.209%, 25.166%, 19.440% and 25.166%, so finally calculating the composite scores F as measure index of agricultural listed companies operating performance.

1.4. Control Variables

The definition table of control variables is shown as Table 5.

1.5. Model Construction

According to the characteristics of the independent variables, multivariate linear regression model is established:

$$F = b_0 + b_1 X_i + g(control\ Variable) + e \quad (1)$$

F is the composite scores of the agricultural listed companies' operating performance; X_i represents the various indexes of the ownership concentration (CR1, CR5, CR10, H, Z index, equity restriction ratio); e represents error ; b_0 , b_1 , γ represent coefficient.

1.6. The Empirical Analysis of Agricultural Listed Companies' Ownership Concentration and Performance

(1) The descriptive statistical analysis of Ownership concentration

According to principal-agent theory, ownership concentration works on the corporate governance mechanism which will have an effect on corporate performance, so, using SPSS statistical software have a descriptive statistical analysis of the ownership concentration of a total of 37 listed agricultural companies in 2014, the results as follows:

Table 6. The descriptive statistics of the agriculture listed companies' ownership concentration in 2014

Statistical data		CR1	CR5	CR10	H10	Z Index	Equity Restriction Ratio
N	Effective	37	37	37	37	37	37
	Omission	0	0	0	0	0	0
Average		0.35026	0.49507	0.54283	0.15855	12.38120	0.5670
Minimum		0.109	0.203	0.242	0.015	1.008	0.03
Maximum		0.713	0.762	0.809	0.508	109.615	2.50

Table 7. Models of aggregation

Model	R	R2	The adjusted R2	The error of standard estimate
1	0.535a	0.286	0.221	.42663005

a. predictive variable: (constant), The natural logarithm of firm size, CR1, Asset-liability Ratio

Mold	Non-standardized coefficient		standardized coefficient	T	Sig.
	B	standard error	Beta		
(constant)	-0.218	1.085		-.201	.842
CR1	-0.554	0.474	0.177	1.169	.251
Asset-liability Ratio	-1.381	0.384	-0.555	-3.597	.001
The natural logarithm of firm size	-.051	0.091	0.086	0.563	0.378

a. dependent variable \\:comprehensive scores

According the above table, the average of the first big shareholder's stake is 35.026%, which belongs to relative holding. The average of the top five shareholders' shareholding is 49.507%, and the agricultural listed companies of the top five shareholders' shareholding is greater than 30% accounted for 89.19% of the total sample company, more than 50% (70.37%). According to the above analysis, the characteristic of agricultural listed companies' ownership concentration is highly concentrated in the top five shareholders, relatively concentrated in the largest shareholder.

The average of the H10 is 0.15855, indicating that great difference between the top 10 shareholders' holding of the agricultural listed companies, also the agricultural listed companies' ownership is concentrated.

The average of the Z index is 12.38120 > 10, indicating that the second largest shareholder of the listed agricultural companies have a very small constraint to the first big shareholder, which is easy to cause the first big shareholder of authoritarian.

The average of equity restriction ratio is 0.5670 < 1, indicate that the second to the fifth largest shareholders have a very small constraint to the first big shareholder, which is not conducive to corporate governance mechanisms playing a role, especially in the aspects of the acquisition and merger and dealership competition ,which causes the governance efficiency is very low.

(2) Regression Analysis of the ownership concentration and Operating Performance

This paper investigates the relationship between ownership concentration and operating performance of the agricultural listed companies. The data is the section data of the agricultural listed companies in 2014, and the multivariate regression model is established as follows:

$$F = b_0 + b_1 X_i + g(control\ Variable) + e \quad (2)$$

By substitution of the scores F obtained from factor analysis, CR1, CR5, CR10, the Z index, the equity restriction ratio and the control variable into the multivariate regression model, then using the Statistical software of SPSS to estimate, the results are as follows: Table 7 is the regression analysis results of CR1 and operating performance of agricultural listed companies in 2014. Table 7 is the regression analysis results of CR1 and operating performance of agricultural of listed companies in 2014.

According to the Table 7, in carry on the goodness of fit test, the adjusted R2 is not high, because there are many other factors affect the operating performance of the agricultural listed companies, from macroscopic angle, including politics, economy, law, etc, but here only the effect of ownership concentration was investigated, which results to the ability of ownership concentration explanation on company's performance is limited, so the adjusted R2 is not high, which is understandable.

According to the Table 7, the sig. level of CR1 is 0.251 > 0.05, so that the first big shareholder's stake and agricultural listed companies operating performance have no significant relationship.

Table 8. Coefficient

Mold	Non-standardized coefficient		standardized coefficient	T	Sig.
	B	standard error	Beta		
(constant)	-.364	1.057		-0.344	0.733
CR$_5$	0.832	0.450	0.267	1.849	0.043
Asset-liability Ratio	-1.282	0.367	-.515	-3.492	0.001
The natural logarithm of firm size	-0.042	0.089	0.070	0.472	0.340
a. dependent variable \: comprehensive scores					

Table 9. Coefficient

Mold	Non-standardized coefficient		standardized coefficient	T	Sig.
	B	**standard error**	**Beta**		
(constant)	-.339	1.039		-.326	0.747
CR10	.943	0.440	.306	2.145	0.039
Asset-liability Ratio	-1.260	0.362	-0.506	-3.486	0.001
The natural logarithm of firm size	-0.031	0.088	0.052	0.352	0.327
a. dependent variable \: comprehensive scores					

Table 10. Coefficient

Mold	Non-standardized coefficient		standardized coefficient	T	Sig.
	B	**standard error**	**Beta**		
(constant)	-0.038	1.090		-.035	0.973
H index	-0.798	0.625	0.192	1.277	0.031
Asset-liability Ratio	-1.331	0.377	-0.535	-3.532	0.001
The natural logarithm of firm size	-0.040	0.092	0.068	0.438	0.364
a. dependent variable \: comprehensive scores					

Table 11. Coefficient

Mold	Non-standardized coefficient		standardized coefficient	T	Sig.
	B	**standard error**	**Beta**		
(constant)	-.245	1.135		-.216	.831
Z index	-.001	.004	-.021	-.134	.894
Asset-liability Ratio	-1.305	.387	-.524	-3.372	.002
The natural logarithm of firm size	-.067	.096	.112	.700	.039
a. dependent variable \: comprehensive scores					

Table 12. Coefficient

Mold	Non-standardized coefficient		standardized coefficient	T	Sig.
	B	**standard error**	Beta		
（constant）	-.230	1.105		-.208	.837
equity restriction ratio	.066	.142	.075	.463	.646
Asset-liability Ratio	-1.225	.417	-.492	-2.935	.006
The natural logarithm of firm size	-.059	.092	.100	.642	.025
a. dependent variable \: comprehensive scores					

Table 8 is the regression analysis results of CR5 and operating performance of agricultural listed companies in 2014

According to the table 8, the sig. level of CR5 is 0.43 < 0.05, so the top five shareholders' shareholding proportion has a positive correlation with the company's performance.

Table 9 is the regression analysis results of CR10 and operating performance of agricultural listed companies in 2014.

According to the table 9, the sig. level of CR10 is 0.39 < 0.05, so the former top ten shareholders of shareholding proportion has a positive correlation with the company's performance.

Table 10 is the regression analysis results of the H index and operating performance of agricultural listed companies in 2014

According to the table 10, the sig. level of H index is 0.31 < 0.05, and the regression coefficient is 0.798, so the H index has a negative correlation with the company's performance.

Table 11: the regression analysis results of Z index and operating performance of the agricultural listed companies in 2014

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According to the table 11, the sig. level of Z index is $0.894 > 0.05$, so the Z index and company management performance have no significant relationship.

Table 12 is the regression analysis results of the equity restriction ratio and operating performance of agricultural listed companies in 2014

According to the table 12, the sig. level of the equity restriction ratio is $0.646 > 0.05$, so the equity restriction ratio and company business performance have no significant relationship.

From what has been discussed above, the top five shareholders' shareholding and the top 10 shareholders holding has a positive correlation with the company's performance; H index has a negative correlation with the company's performance. The first big shareholder's stake, Z index and the equity restriction ratio have no significant relationship with agricultural listed companies' operating performance.

The sig. level of control variable financial leverage and corporate scale is < 0.05 in the process of regression analysis, indicating that the setting of the control variables successfully controls the effect of agriculture listed company financial leverage and firm size in the corporate performance. Among them, the company size has a significant negative correlation with the agricultural operating performance of the listed companies, indicating that there is exist the phenomenon that the firm size is greater, but economic benefit is worse to a certain extent Financial leverage has a significant negative correlation with the company's operating efficiency, indicating that if the financial leverage too high, which will have a bad effect on corporate performance in agricultural listed companies.

2. The Conclusion and Suggestion of the Empirical Research

2.1. The Conclusions

(1) The agricultural listed companies' ownership highly concentrated in the top five shareholders, relatively concentrated in the first big shareholder. Chinese stock market is more special, the vast majority of listed companies are composed of state-owned enterprise restructuring, so the state-owned shares of the listed company as the solely big shareholder for many years and the ownership concentration is very high. Because the agricultural listed companies as a part of China's stock market, so the features on this point are more obvious.

(2) The top five shareholders' shareholding and the top 10 shareholders ownership of agricultural listed companies have a positive relation with the corporate performance. The average of CR5 and CR10 of the agricultural listed companies in 2014 is 49.507% and 54.283%, indicating that the equity of the listed companies is relatively concentrated. From the principal-agent theory, incentive mechanism and supervision mechanism can play a better role and improve operational efficiency in corporate governance.

(3) The H10 index of agricultural listed companies has a negative correlation with the company's operating performance. H10 can show whether the top 10 shareholders holdings uniform, also whether concentrated. The H10 is greater, indicating that the gap of the shareholders holding is greater and the equity is more scattered; the H10 is smaller, the gap is smaller and the stake is more concentrated. The average of the H10 index of the agricultural listed companies in 2014 is 0.15855, indicating that the top 10 shareholders holdings differences, which is not conducive to multiple main body playing a role in corporate governance. According to the principal-agent theory, which is not conducive to the agency competition playing a role, so appropriate equity concentration is conducive to improving the business performance.

2.2. Policy Suggestion

(1) Maintaining a certain amount of ownership concentration

According to the above studies, for agricultural listed companies, equity overly concentrated or overly dispersed as will lead to low efficiency of corporate governance, so the equity of our country agricultural listed companies should keep relatively concentration. Because once the equity overly concentrated, the big shareholders will in an absolute holding position, which is not conducive to multiple main bodies playing a role in corporate governance. In the absence of checks and balances of other shareholders and external threat, the large shareholder will damage the interests of the listed company or small shareholders when them found which can obtain larger gains, so the large shareholder who be in an absolute holdings position would be easy to produce selfish motive, also more convenient through these channels to obtain higher yields, so there exist the company which equity is overly concentrated, but the corporate performance is low.

(2) Reduce the gap between large shareholders holding

If the top shareholder stake is very unequal, this is easy to generate the phenomenon of "only one big share. The above empirical study also indicates that the balance of degree of the top 10 shareholders holding of agricultural listed companies have significantly negative correlation relationship with the corporate business performance, so reducing the top shareholder's stake, which can effectively increase the checks and balances between shareholders, which is beneficial to multiple main body playing a role and improving the operating performance of listed companies. In the dealership competition, for example, if the equity structure of agricultural listed companies is that only one big share, as long as the principal is favored by the large shareholders, in competition with other agents

the principal is always in a dominant position, when the big shareholders realize that his appointment is wrong who want to replace the principal, which is often requires high cost, so this kind of ownership structure is very unfavorable and not conducive to improving the business performance of the company.

(3) Strengthen the supervision of Banks to listed companies

Through empirical study, founding that asset-liability ratio has a significantly negative relationship with corporate performance, indicating that the company's financial leverage is too high, which have an adverse effect on a company's performance. Agriculture listed companies' debt financing efficiency is not high, the reason may be the soft constraint and bankruptcy mechanism of debt financing in our country is not perfect.

Banks in China as the biggest provider of corporate capital, whose role in the corporate governance system did not play out, bank's influence on the owner is very weak. When a company formulates strategy and related policy, the bank did not have any effect.

Therefore, as the owner of the state-owned banks, countries should not only accelerate the process of commercial of banks, should also be institutionally ensure that the banks playing a role in corporate governance at the same time.

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