Research on the Relationship between Market Structure and Market Performance of Trust Industry in Western Region

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Abstract: Based on the SCP paradigm of industrial organization theory, this paper empirically examines the interaction between the market structure and market performance of the trust industry in the western region. The study concluded that market concentration is significantly negatively correlated with market performance, and market share and firm size have a significant positive correlation with the impact of trust market performance. On the other hand, the market performance of the trust industry in the western region has a positive effect on the market structure. Finally, the relationship between the market structure of the trust industry in the western region and market performance is summarized.

1. Introduction

As the single financial industry in the financial services field that can spin the money market, capital market and industrial market, the trust industry has matured in developing countries and made significant contributions to the economic development of the countries and regions. China Trust Industry Association released the "Main Business Data of Trust Companies in 2017". The indicators show that the trust industry actively promotes its supply-side structural reforms, accelerates the transformation and upgrading, strengthens risk management, seeks growth momentum, returns to trust sources, and scientifically builds business, model to attain sustainable development of the industry[1,2]. Taking the western region as an example, depending to the data released by the China Trust Association website, by the end of 2017, the number of trust institutions in the region has grown to 16 with total assets of 143.8 billion yuan. In the same year, trust business income reached 19 billion yuan, and the average per capita profit reached It is 3.84 million yuan.

At the same time, due to the imbalance of China's regional economic structure and the widening of the gap, the non-equilibrium of this regional economic structure has finally led to the trend of regional differences in the development of China's trust industry[3,4]. In order to grasp the competitive ,situation of the trust market in the western region, it is necessary to conduct in-depth research on the market structure and performance of the trust industry in the region. Therefore, based on the SCP paradigm of industrial organization theory, this paper focuses on the actual development of the trust industry in the western region in recent years, and conducts an in-depth study on the market structure and performance of the trust industry in the region.

2.   Theoretical Analysis and Hypothesis

2.1. Theoretical Analysis

Based on the SCP analysis paradigm of industrial organization theory, the relationship between the market structure and performance of the trust industry in the western region can be considered from the following two points.

First, in the short run, the market structure of the trust industry in the western region of China remains relatively stable. It can restrain the market behavior of the trust industry to a certain extent[5]. That is, provide strategies for the operation and price of non-price competition in the trust industry in the western region. The basis of the aspect. In addition, the performance level of the trust industry in the western region depends on the operation status of the trust companies in the region, but its operation status is mainly determined by the behavior of the trust company's business structure, that is, market structure determines market performance.

Second, in the long run, the market structure of the trust industry in the western region is slowly changing. On the one hand, this change is attributable to market behavior. On the other hand, changes in market performance will directly affect the market structure. Due to stricter regulatory policies in China's trust industry, trust companies often crowd out competitors through mergers, acquisitions and restructuring[6,7]. Obviously, mergers, acquisitions and reorganizations between trust companies are required to lead to increasing market concentration in the trust industry[8]. Under normal circumstances, trust companies with high market performance will generally expand their scale and increase their market share in the future operations, which will cause the market concentration to rise. That is to say. The market performance of the trust industry in the western region has a certain adverse effect on the market structure.

2.2. Theoretical Hypothesis

According to the theory of industrial organization, the judgment criteria for the applicability of the two hypotheses about the relationship between the market structure and performance of the trust industry in the western region are analyzed:

If the empirical results show that the coefficient of market concentration HHI is significantly positive, and the correlation between market share MS and business performance ROA is not significant, then we can think that the trust market in the western region conforms to the Harvard school's "structural performance" hypothesis.

If the empirical results show that the coefficient of market share MS is significantly positive, and the correlation between market concentration HHI and business performance ROA is not significant, then we can think that the western region trust market is in line with the Chicago School's "relative market power" hypothesis.

3.   Research Design

3.1. Sample and Data Sources

This paper selects the panel data of 15 trust companies in western China from 2011to 2015. The datum is from the annual financial reports of each company. Measurement software Eviews 8 was chosen to test the interaction between the market structure and market performance of the trust industry in the western region through the OLS regression method of panel data.

3.2. Model Design and Variable Description

3.2.1. Empirical Model of Market Structure Versus Market Performance

Based on the model studied by Lan Jiang (2012), based on the development reality of the trust industry in the western region, this paper adds variables that reflect the market structure of trust companies or other variables that reflect the overall market performance, and establishes a trust market in the western region. An econometric model of the impact of structure on market performance:

$$ROA = \beta_0 + \beta_1 HHI + \beta_2 MS + \beta_3 TA + \beta_4 YW + \beta_5 GDP + \varepsilon \qquad (1)$$

Among them, ROA is the market performance of the trust company, HHI is the market concentration, MS is the market share, TA is the total assets of the trust company, YW is the business structure of the trust company, and the GDP of the exogenous environment is the GDP growth rate of each year, β_i For each coefficient to be evaluated, ε is a random term.

3.2.2. Empirical Model of Market Performance Versus Market Structure

Based on the development reality of the trust industry in the western region, this paper adds variables that reflect the profit structure of trust companies or other variables that reflect the performance of the entire market to construct a quantitative test model for whether the market performance of the trust industry in the western region has a negative effect on the market structure:

$$MS = \beta_0 + \beta_1 ROA + \beta_2 XT + \beta_3 LX + \beta_4 TZ + \varepsilon \qquad (2)$$

Among them, MS is the market share, ROA is the trust company's return on assets, XT, LX and TZ is the proportion of trust business income and interest income and investment income disclosed by each trust company in the annual report income structure table, β_i is the coefficient of each estimate, ε is a random item.

3.3. Analysis of Empirical Results

3.3.1. Empirical Analysis of the Impact of Market Structure on Market Performance

Owing to the different individual influences, the panel data model can be divided into two types: fixed effect model and random effect model. However, the time series collected in this paper is short, and the number of sample companies is small, so choosing different models may have a certain impact on the results. Therefore, before the regression analysis of the panel data model, the software Eviews 8 is used to estimate the random effects and fixed effects of the model (1), and the specific model is selected according to the test. The results show that the random effect model has better goodness of fit, and the Hausman test results also accept the null hypothesis. Therefore, the regression model is finally set as the random effect model. The specific results are shown in Table 1.

According to the regression results obtained by each model, we can get the following conclusions:

In model 1, except for other control variables, only the market concentration HHI is an independent variable. The test results show that in the western trust market, market concentration is negatively correlated with market performance, and it is statistically significant.

Model 2 adds the market share as an independent variable based on Model 1. The results show that the newly added market share variable does not change the original HHI coefficient direction in Model 1, and statistically pass the significance. Test. There is a significant positive correlation between market share MS and market performance. This result indicates that the trust company's

market share has a positive effect on market performance levels in the western trust market. This result proves that the impact of market structure on performance in the western region at this stage rejects the "structural performance" hypothesis and the "relative market power" hypothesis.

Model 3 introduces two independent variables of total assets and market shares on the basis of model 1. The results show that the influence of market concentration on business performance is still significant, and the two are negatively correlated; market share and total assets The impact on market performance is still significantly positively correlated, so the "structural performance" hypothesis and the "relative market power" hypothesis are further rejected. In addition, the impact of the size of the trust company's assets on market performance is significantly positively correlated, indicating that the scale economy plays an important role in promoting performance in the western trust market at this stage. This is also consistent with the actual development of the trust industry in the western region. The scale of the trust company's operation is basically positively related to its business performance.

In addition, the regression results of each equation show that economic growth gets a positive effect on the performance of the trust industry market, and also shows significant results in the regression results of Model 1 and Model 2. This shows that the continuous improvement of the economic level in the western region in recent years has provided a good opportunity and environment for the development of the local trust industry. On the one hand, it helps to the expansion of the scale of trust assets, on the other hand, it also increases the overall income level of the trust industry. At the same time, the business structure (YW) is not stable to the trust company's operating performance, and only shows a significant positive correlation in Model 1, while the correlation between Model 2 and Model 3 is not significant, even in the model 3 changed the original coefficient direction.

Table 1: Regression and test results of each model sample.

	Model 1		Model 2		Model 3	
	Random effect	Fixed effect	Random effect	Fixed effect	Random effect	Fixed effect
C	5.9171***	6.0815***	5.8568***	6.1684***	5.9705***	6.0771***
	（3.3765）	（3.4407）	（4.2614）	（4.4438）	（4.3840）	（4.4183）
HHI	-0.8438***	-0.8640***	-0.8392***	-0.8831***	-0.7879***	-0.8148***
	（-3.3511）	（-3.4042）	（-4.2493）	（-4.4301）	（-4.0023）	（-4.0192）
MS			1.0385***	1.2410***	1.2990***	1.3494***
			（6.9083）	（6.0358）	（7.0857）	（6.2320）
TA					-0.0337**	-0.0277
					（-2.4375）	（-1.4668）
YW	0.0963**	0.0599	0.0353	0.0011	-0.0222	-0.0277
	（2.0693）	（1.1201）	（0.9526）	（0.0245）	（-0.5095）	（-0.5901）
GDP	0.2628**	0.2882**	0.2781***	0.3220***	0.1013	0.1511
	（2.3679）	（2.5083）	（3.2060）	（3.5623）	（0.8949）	（1.0289）
R^2	0.0577	0.6422	0.5267	0.7832	0.5652	0.7914
Adj.R^2	0.0448	0.5355	0.4996	0.7135	0.5337	0.7193

Note: The parentheses in the above table are statistical t values for each coefficient. *** indicates significant at 1% confidence level, ** indicates significant at 5% confidence level, and * indicates significant at 10% confidence level.

In summary, the market structure of the trust industry in the western region plays a decisive role in market performance. From the perspective of the factors affecting the market structure, market concentration is significantly negatively correlated with the performance of the trust market. The impact of market share on business performance is significantly positively correlated. The performance of the firm's size on the trust market is significantly positive.

3.3.2. Empirical Analysis of the Impact of Market Performance on Market Structure

Using the measurement software Eviews 8 to estimate the fixed effect and random effect of the model (3.2) respectively, it is found that the goodness of fit of the random effect is obviously better than the fixed effect, and the result is the Hausman test of the random effect model. The fixed effect model was also rejected. Therefore, the panel data of the sample company were finally subjected to OLS regression using the random effect model. The final sample regression and test results are shown in Table 2.

Table 2: Sample regression results.

	Coefficient	ROA	XT	LX	TZ	R^2	Adjusted R^2
Random effect	0.0022 (0.1029)	0.2634*** (5.6163)	0.0005** (2.2388)	-0.0010* (-1.9485)	0.0003 (0.9801)	0.4120	0.3784
Fixed effect	0.0025	0.2380***	0.0005**	-0.0011*	0.0003	0.8802	0.8417

*Note: The parentheses in the above table are statistical t values for each coefficient. *** indicates significant at 1% confidence level, ** indicates significant at 5% confidence level, and * indicates significant at 10% confidence level.*

According to the regression results, we can get the following conclusions:

The operating performance of the trust companies in the western region ROA does have a significant positive correlation effect on the market structure MS. This aspect is due to the high performance of trust companies, which will generally further expand the scale of operations in the subsequent period, using the economies of scale to reduce their operating costs, resulting in their market share continues to expand, market concentration continues to climb. On the other hand, in the western region, trust companies with better market performance are basically larger in scale, occupying a large share of the market, and their economies of scale are generally high. That is to say. The market performance of the trust industry in the western region has a positive effect on the market structure.

Empirical analysis shows that there is a significant positive correlation between the trust business income ratio XT and the market structure MS in the trust market in the western region. There is a significant negative correlation between the interest income ratio LX and the market structure MS. The relationship between investment income ratio TZ and market structure MS is not significant, but it shows a positive correlation trend. At the same time, trust business income ratio XT, interest income ratio LX, investment income ratio TZ to western region trust market structure the impact factor is small. To a certain extent, this reflects that the trust companies in the western region are also more inclined to invest in the use of assets, probably because the profit margin of traditional trust products in the trust market has been greatly reduced, which makes these trust companies use the outbreak of investment income to make up their own trust business. The gap is caused by the slowdown in income growth.

4. Conclusion

This paper also empirically tests the relationship between the market structure of the trust industry and market performance in the western region. It is found that the market structure of the trust industry in the western region plays a decisive role in market performance. From the perspective of the factors affecting the market structure, market concentration is significantly negatively correlated with the performance of the trust market. The impact of market share on business performance is still significantly positively correlated. The performance of the firm's size in the trust market is significantly positive. The empirical analysis shows that the relationship between market structure and performance in western China at this stage rejects the "structural performance" hypothesis and

the "relative market power" hypothesis. This may be due to the fact that under the strict supervision policy of the trust industry in the country, there are more serious geographical restrictions on trust companies among peers. The trust market presents a distinctive "regional plate" characteristic, and the trust market concentration in the region is relatively high.

On the other hand, the market performance of the trust industry in the western region has a positive effect on the market structure. From the perspective of the profit structure of the trust company, there is a significant positive correlation between the proportion of trust business income and the market structure in the trust market in the western region. There is a significant negative correlation between the interest income ratio and the market structure. The relationship between the proportion of revenue and the market structure is not significant, but it shows a positive correlation. This shows that investment income has played a certain role in boosting the performance and scale expansion of trust companies in the western region. Trust companies tend to invest in asset utilization, reflecting to some extent the enormous profit margin of traditional trust products in the western trust market. The narrowing of the range makes most trust companies rely on the outbreak of investment income to make up for the shortfall caused by the slowdown in revenue growth of their trust business.

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