

# Product Market Competition, Ownership Differences, and Earnings Management: Evidence from Chinese Listed Companies

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**Abstract**—This research uses data of Chinese listed companies during 2009-2012 to test the effects of product market competition on the incentives to engage in earnings manipulation in companies with different ownership type. Results show that competitive market has no impact on earnings management in state-owned companies, while non-state-owned companies in more competitive markets have less incentive to engage in earnings manipulation. Results also show that all kinds of companies with higher status in product market tend to incur higher level of earnings management. Moreover, for non-state-owned companies, concentrated ownership structure weakens the effect of product market competition but strengthen the effect of market status on earnings management.

**Keywords**—*Competition; Ownership Differences; State-owned; Non-state-owned; Earnings Management*

## I. INTRODUCTION

As an important part of the external restriction mechanism in corporate governance, product market competition is one of the market environment elements that affect corporate financial decisions. Some studies have found that competitive market can provide similar information, reduce the information asymmetry, inhibit moral hazard (Hart, 1983), and limit earnings management behavior. However, other studies have shown that competition can reduce enterprise profit level, compress profit space, produce liquidation threat (Schmidt, 1997), increase external financing pressure (Yin, etc., 2010), and encourage earnings manipulation. Research conclusion is inconsistent. Few literatures stand on the perspective of ownership differences to further study the relationship between product competition market and earnings management. In fact, companies with different ownership types are faced with different internal governance mechanism and external environmental constraints (Sun, etc., 2014), which may lead to different impact of product market competition on earnings management. Based on the , the article tries to answer the following two questions: whether product market competition has different influence on earnings management in state-owned

enterprises and non-state-owned enterprises? When the ownership structure is concentrated, can the product market competition limit earnings management behavior?

## II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### A. *Product Market Competition, Ownership Differences and Earnings Management*

The reason that earnings management cannot be eliminated is that the existence of asymmetric information. Enterprise managers have the information that others, including investors, cannot get. It is because the information asymmetry that leads the management authority has the chance in earnings manipulation (Wei, 2000). Restraining earnings management level needs hinder factors, including the shareholders' committee, certified public accountants' auditing work, and tax auditing, etc.. All these factors can limit managers' earnings management motivation in a certain extent.

Competitive markets caused current competitors in the market facing similar constraints of supply and demand situation, and reduce the level of information asymmetry, which is conducive for investors and policy makers to analysis companies' actual earnings, and inhibit earnings management behaviors (Balarkrishnan and Cohen, 2011). Product market competition as the company's external governance mechanisms (Allen and Gale, 2000), plays an important role in reducing the information asymmetry, restraining the risk of moral hazard, and lowering levels of earnings management.

However, the state-owned enterprises face ownership absence and soft-restraints-on-debt phenomenon for long term, which causes serious insider-control problem, lacking in effective shareholders' and creditors' constraints, managers are easier to control the companies' accounting information system (Sun, etc., 2014). Due to the lack of internal and external supervision, even if level of information asymmetry declines, earnings management behavior cannot be effectively inhibited. Therefore, the product market competition has little influence on earnings management level. When the state-owned enterprises in the monopoly market, the market information asymmetry

is serious, which provides more convenient condition for managers to manipulate earnings, and improve the level of earnings management.

H1a: For state-owned enterprises, the product market competition has little influence on earnings management level.

H1b: For state-owned enterprises, companies with higher status in the product market are more likely to manipulate earnings.

In contrast, non-state-owned enterprises in China do not have the owner absence phenomenon, so shareholders can supervise earnings management behavior. At the same time, the creditors have stronger supervision on non-state-owned enterprises. The fierce competition in the market reduces information asymmetry, which is advantageous for the shareholders and creditors monitoring managers' behavior. Therefore, the competitive market will reduce level of earnings management in non-state-owned enterprises. If the non-state-owned enterprises have high status in product market, the weaker and other companies' information are not comparable, which causes companies with high status owning powerful information advantage, and information asymmetry being more obvious. Therefore, managers' personal behaviors are not easy to be perceived by the market, and managers are more likely to manage earnings in order to conceal their slack behavior.

H2a: For non-state-owned enterprises, the competitive market has negative effect on earnings management.

H2b: For non-state-owned enterprises, companies with higher status in the product market are more likely to manipulate earnings.

### B. Product Market Competition, Ownership Structure and Earnings Management

Li (2004) pointed out that non-state-owned listed companies in China have the feature of family firm. When family members, shareholders and executives combine together, it will appear phenomenon of family altruism and moral hazard. In the companies with concentrated ownership structure, controlling shareholders and senior executives have the close relationship, and controlling shareholders may voluntarily withhold information management behavior (Wei, 2000). Managers' earnings management cannot get valid supervision from shareholders. Even if the level of information asymmetry declines, the possibility of earnings management may rise. When companies are in a strong position, the executives have larger space to manipulate earnings.

H3a: For non-state-owned enterprises, when ownership structure is more concentrated, the effect of product market competition on earnings management will be weaker.

H3b: For non-state-owned enterprises, when ownership structure is more concentrated, the effect of companies' status in product market on earnings management will be stronger.

## III. THE SAMPLE, VARIABLES AND MODELS

### A. The Sample

This article selects Shanghai and Shenzhen listed companies between the year 2008 and 2012 as the research object, eliminate financial listed companies and listed companies with incomplete data. Finally, this article

gets 6510 samples — 3764 state-owned enterprises' samples and 2746 non-state-owned enterprises'.

Sample data mainly comes from CSMAR database, and this article uses the software STATA to analysis statistics.

### B. Measurement of Earning Management: A Correction Model of Jones

Xia (2003) used some adjustment models to measure earnings management in China, and found the cross-section Jones model can properly reveal the earnings management level of listed companies in China. Therefore, this article use the absolute value of handling accrued items ( $|DA|$ ) to measure the earnings management level of listed companies. The greater the  $|DA|$  value is, the higher earnings the management level have.

(1) Calculating the parameter values that using the basic model of Jones to estimate non-discretionary accruals (NDA) required.

$$\frac{GA_t}{Asset_{t-1}} = \alpha_0 \left( \frac{1}{Asset_{t-1}} \right) + \alpha_1 \left( \frac{\Delta Rev_t}{Asset_{t-1}} \right) + \alpha_2 \left( \frac{PPE_t}{Asset_{t-1}} \right) + \varepsilon_t \quad (1)$$

In Model (1),  $GA_t$  stands for total annual accrued profits in the year t.  $GA_t$  is equal to the difference between operating profit in the year t ( $NI_t$ ) and net operating cash flow in the year t ( $OCF_t$ ).  $\Delta Rev_t$  stands for the difference between operating income in the year t and the year t-1;  $PPE_t$  is fixed assets in the year t;  $\alpha_0$ ,  $\alpha_1$ ,  $\alpha_2$  is required to calculate the uncontrollable profit, which can reflect the parameter estimates of industry characteristics.

(2) Using parameter estimation in Model (1) to calculate the uncontrollable profits. Correction model of Jones can avoid overestimating uncontrollable profit, and underestimating earnings management.

$$NDA_t = \alpha_0 \left( \frac{1}{Asset_{t-1}} \right) + \alpha_1 \left( \frac{\Delta Rev_t - \Delta Ar_t}{Asset_{t-1}} \right) + \alpha_2 \left( \frac{PPE_t}{Asset_{t-1}} \right) \quad (2)$$

In Model (2),  $NDA_t$  stands for not-handling profit for the year t,  $\Delta Ar_t$  is the difference between accounts receivable in the year t and the year t-1.

(3) Calculating the absolute value of handling profits.

$$|DA_t| = \left| \frac{TA_t}{Asset_{t-1}} - NDA_t \right| \quad (3)$$

In Model (3),  $|DA_t|$  stands for the absolute value of handling profit for the year t.  $TA_t$  equals to net income minus operating cash flows.

### C. Measurement of Product Market Competition

Herfindahl-Hirschman index (HHI) : the measure of the size of firms in relation to the industry. The formula is

$HHI = \sum_{i=1}^N (S_i / S)^2$ .  $S_i$  is the operating income of company I in the industry, and S stands for total operating income of the industry. N means the number of listed companies in the industry. The lower the HHI value is, the more competitive the industry is. This article uses the industry classification standard of Chinese Securities Regulatory Commission.

Industry listed company number (LNN): the number of listed companies in the industry, as the second measurement of the competition in the industry. The greater value the LNN is, the more competitive the industry is.

Lerner Index (PCM): this article uses Lerner Index or marginal cost price (PCM) to measure the listed company's competitive position in the industry (pricing power). Referring from the literature of Xing and Chen (2013), this article uses the formula ‘PCM = (operating income-operating cost-sales cost-administration cost)/revenue. The larger the value of PCM, the more pricing power the companies have.

#### D. Models and variables

The Model (4) is developed to test the hypotheses about state-owned companies.

$$|DA_g| = \beta_0 + \beta_1 * PMC + \beta_2 * LOSS + \beta_3 * ROE + \beta_4 * FROE + \beta_5 * leverage + \beta_6 * LnAsset + \beta_7 * Growth + \beta_8 * Year + \beta_9 * ind + \lambda \quad (4)$$

In the Model (4),  $|DA_g|$  stands for operational profits in state-owned enterprises and its number can reflect the level of earnings management. The explanatory variable is PMC, reflecting the degree of competition in product market. Controlled variables include LOSS, ROE, FROE, leverage, LnAsset, Growth, Year, and Ind. LOSS is the dummy variable, reflecting the situation whether the enterprises have losses for two consecutive years. If losses happens in two consecutive years, then  $LOSS = 1$ ; otherwise, the  $LOSS = 0$ . FROE is also a dummy variable, reflecting the equity refinancing risk. As share-issue qualification of the company includes the condition that ROE cannot be less than 6%, Xia(2003) found that Chinese companies have higher motivation to manipulate

natural logarithm of the assets.  $Growth = (\text{operating income in this year} - \text{operating income in last year}) / \text{revenue in last year}$ . The variable Growth reflects the company growth. Year and Ind are virtual variables, standing for the time and different industries.  $\lambda$  is the random disturbance, and the expected variance is 0.

The Model (5) is developed to test the hypotheses about non-state-owned companies.

$$|DA_g| = \beta_0 + \beta_1 * PMC + \beta_2 * CH + \beta_3 * PMC * CH + \beta_4 * LOSS + \beta_5 * ROE + \beta_6 * FROE + \beta_7 * leverage + \beta_8 * LnAsset + \beta_9 * Growth + \beta_{10} * Year + \beta_{10} * ind + \lambda \quad (5)$$

In the Model (5),  $|DA_p|$  stands for operational profits in non-state-owned enterprises and its number can reflect the level of earnings management. The definition of variables PMC, LOSS, FROE, Leverage, LnAsset, Growth, year and ind is as same as these in Model (4). The variable CH reflects the level of ownership concentration, including two specific Holding and Herfindahl5. The variable Holding stands for the first shareholder stake, reflecting the characteristics of ownership structure. The variable Herfindahl5 reflects sum of squares of top 5 shareholder stake.  $\lambda$  is the random disturbance, and the expected variance is 0.

TABLE I. DESCRIPTIVE STATISTICS OF VARIABLES

variable	All sample (N=6510)				State-owned (N=3764)				Non-state-owned (N=2746)			
	mean	sd	min	max	mean	sd	min	max	mean	sd	min	max
DACC	-0.004	0.089	-0.274	0.277	-0.003	0.085	-0.274	0.277	-0.006	0.094	-0.008	0.277
DACC	0.066	0.063	0.001	0.313	0.062	0.060	0.001	0.313	0.070*** (5.018)	0.066	0.001	0.313
HHI	0.0720	0.061	0.021	0.362	0.076	0.068	0.021	0.362	0.067*** (-5.816)	0.049	0.021	0.362
LNN	4.782	0.713	3.466	6.125	4.721	0.701	3.466	6.125	4.866*** (8.103)	0.721	3.466	6.125
PCM	0.103	0.144	-0.459	0.553	0.097	0.148	-0.459	0.553	0.110*** (3.447)	0.138	-0.459	0.553
holding	36.15	15.50	8.630	75.84	38.740	15.660	8.630	75.840	32.588*** (-16.125)	14.544	8.630	75.840
Herfindahl5	0.170	0.124	0.012	0.578	0.189	0.128	0.012	0.578	0.146*** (-14.048)	0.112	0.012	0.578
LOSS	0.022	0.147	0	1	0.027	0.161	0	1	0.016*** (-2.967)	0.124	0	1
ROE	0.068	0.129	-0.700	0.342	0.063	0.137	-0.7	0.342	0.074*** (3.353)	0.117	-0.7	0.342
FROE	0.061	0.239	0	1	0.059	0.236	0	1	0.063*** (-20.543)	0.243	0	1
leverage	0.486	0.207	0.054	0.896	0.529	0.195	0.054	0.896	0.426*** (-20.543)	0.207	0.054	0.896
Lnasset	21.89	1.281	19.256	25.768	22.239	1.332	19.256	25.768	21.419*** (-26.853)	1.036	19.256	25.400
Growth	0.221	0.595	-0.634	4.502	0.208	0.559	-0.634	4.502	0.238** (1.977)	0.639	-0.634	4.502

Note: \*\*\*, \*\*, \*stand for significance levels of 1%, 5%, 10%, respectively (two-tailed)

earnings when ROE is between 6% and 7%. Therefore, this articles sets  $FROE = 1$ , if ROE is between 6% and 7%; otherwise,  $FROE = 0$ . Leverage stands for the debt level of the enterprise, and  $Leverage = \text{liabilities} / \text{total assets}$ . The variable LnAsset reflecting assets scale is equal to the

## IV. EMPIRICAL TEST

### A. Single Variable Analysis

#### 1) Descriptive Statistics

Table 1 shows descriptive statistics. Researchers divide sampled companies into state-owned ones and non-state-owned samples, and then carry out mean value test on their level of earnings management. According to the results in

Table 1, the level of earnings management in non-state-owned companies is significantly higher than that of state-owned companies, which shows that managers of non-state-owned companies are more inclined to implement earnings management. HHI of non-state-owned enterprises is lower than that of state-owned enterprises and the LNN is higher in non-state-owned enterprises. The result of T test is significant, which shows the fact that non-state-owned enterprises face more fully market competition and bigger competitive pressure. In addition, the results of T test for holding and Herfindahl5 index demonstrate that ownership concentration level of state-owned enterprises is obviously higher. And the results of LOSS and ROE show that the performance of state-owned enterprises is better.

## 2) Correlation Test.

Table 2 shows Pearson correlation coefficient. The results show that: (1) the number of listed companies in the industry(LNN) is significantly positively related to the

TABLE II. CORRELATION COEFFICIENTS OF THE MATRIX

	DACC	HHI	LNN	PCM	holding	Herfindahl5	LOSS	ROE	FROE	leverage	Lnasset	Growth
DACC	1											
HHI	-0.003	1										
LNN	-0.038***	-0.501***	1									
PCM	0.133***	0.120***	-0.163***	1								
holding	0.056***	0.092***	-0.025**	0.163***	1							
Herfindahl5	0.061***	0.109***	-0.027**	0.181***	0.964***	1						
LOSS	0.025**	-0.028**	0.031**	-0.111***	-0.061***	-0.059***	1					
ROE	0.130***	0.083***	-0.047***	0.505***	0.113***	0.127***	0	1				
FROE	-0.031**	0.004	-0.008	0.025**	0.0140	0.016	0	-0.005	1			
leverage	0.036***	-0.011	-0.081***	-0.131***	0.077***	0.059***	0	-0.155***	-0.042***	1		
Lnasset	-0.027**	0.153***	-0.097***	0.214***	0.306***	0.340***	-0.1	0.189***	0.005	0.418***	1	
Growth	0.201***	0.042***	-0.028**	0.159***	0.059***	0.072***	0	0.203***	-0.006	0.068***	0.059***	1

Note: \*\*\*, \*\*, \*stand for significance levels of 1%, 5%, 10%, respectively (two-tailed)

earnings management level (| DACC |), and Lerner Index (PCM) has negative correlation with the earnings management level, which shows that the competitive market reduces the motive of earnings management for managers, and product market competition status aggravates managers' earnings management motivation. (2) The variable | DACC | is significantly positively related to ownership concentration, which may indicate that the more concentrated the ownership, the higher likelihood of earnings management. (3) The correlation coefficient of holding and Herfindahl5 is 0.964, which shows that these two variables have serious collinearity problem. Therefore, when taking multiple regression tests, these two variables should not be put into the model at the same time. (4) Correlation coefficients among dependent variables, explanatory variables and control variables are far less than 0.8, which shows that the regression models in this article do not have serious multi-collinearity problem.

## B. Multiple Regression Analysis

### 1) Regression Analysis of Model(4)

The regression analysis results of Model (4) are presented in Table3.

Table 3 lists the multiple regression results of the Model (4). From left to right model in Table 3, the explanatory variable (PMC) is Herfindahl-Hirschman index (HHI), industry listed company quantity (LNN), Lerner Index (PCM, competitive status), respectively. The results show that goodness-of-fit of all adjusted models is

over 50%, and F value is significant. Table 3 shows that: (1) The variable | DACC | of state-owned companies has no significant relationship with Herfindahl-Hirschman index (HHI) and the number of the listed company (LNN), which shows that product competition in the market has no significant effect on managers' earnings management motivation. This result supports hypothesis H1a. (2) The variable | DACC | is significantly positively related to Lerner Index (PCM, competitive status), which demonstrates that for the state-owned enterprises, managers in the companies with strong product market status have strong earnings management motivation. This results supports support hypothesis H1b. Other control variables have significant level of 1% or 5%.

TABLE III. MULTIPLE REGRESSION RESULTS OF MODEL (4)

VARIABLES	Model (4-1)	Model (4-2)	Model (4-3)
HHI	-0.005 (0.717)		
LNN		-0.002 (0.177)	
PCM			0.054*** (0.000)
LOSS	0.012* (0.051)	0.012* (0.054)	0.015** (0.012)
ROE	0.045*** (0.000)	0.045*** (0.000)	0.021** (0.013)
FROE	-0.012*** (0.003)	-0.012*** (0.003)	-0.013*** (0.001)
leverage	0.010* (0.082)	0.009* (0.097)	0.015*** (0.007)
Lnasset	-0.003*** (0.000)	-0.003*** (0.000)	-0.004*** (0.000)
Growth	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)
Observations	3764	3764	3764
Adjusted R-squared	0.549	0.550	0.554
F	574.8***	575.0***	586.2***

Note: \*\*\*, \*\*, \*stand for significance levels of 1%, 5%, 10%, respectively (two-tailed)

### 2) Regression Analysis of Model(5)

The regression analysis results of Model (5) are presented in Table4.

TABLE IV. MULTIPLE REGRESSION RESULTS OF MODEL (5)

VARIABLES	Model (5-1)	Model (5-2)	Model (5-3)	Model (5-4)	Model (5-5)	Model (5-6)	Model (5-7)	Model (5-8)	Model (5-9)	Model (5-10)	Model (5-11)	Model (5-12)
HHI	0.018 (0.544)			0.050 (0.391)			0.019 (0.516)			0.016 (0.708)		
LNN		-0.005** (0.014)			-0.009** (0.028)			-0.005** (0.010)			-0.008** (0.011)	
PCM			0.035*** (0.001)			-0.052** (0.014)			0.034*** (0.001)			-0.016 (0.289)
holding	0.0004*** (0.000)	0.0004*** (0.000)	0.0004*** (0.000)	0.001*** (0.000)	-0.0005 (0.645)	0.0000 (0.801)						
herfindahl5							0.062*** (0.000)	0.062*** (0.000)	0.058*** (0.000)	0.060*** (0.002)	-0.025 (0.741)	0.003 (0.870)
cHH				-0.001 (0.525)								
cLH					0.0002 (0.1216)							
cPH						0.003*** (0.000)						
cHHE										0.031 (0.902)		
cLHE											0.018 (0.244)	
cPHE												0.364*** (0.000)
LOSS	-0.011 (0.252)	-0.011 (0.301)	-0.009 (0.353)	-0.012 (0.249)	-0.011 (0.294)	-0.011 (0.248)	-0.011 (0.246)	-0.012 (0.295)	-0.011 (0.342)	-0.009 (0.247)	-0.011 (0.92)	-0.012 (0.231)
ROE	0.065*** (0.000)	0.064*** (0.000)	0.048*** (0.000)	0.065*** (0.000)	0.064*** (0.000)	0.048*** (0.000)	0.065*** (0.000)	0.064*** (0.000)	0.048*** (0.000)	0.065*** (0.000)	0.064*** (0.000)	0.049*** (0.000)
FROE	-0.000233 (0.963)	-3.36e-05 (0.995)	-0.000266 (0.958)	0.000235 (0.963)	0.00006 (0.990)	0.000656 (0.896)	-0.000370 (0.941)	-0.000173 (0.972)	-0.000393 (0.938)	0.000363 (0.942)	0.000163 (0.974)	0.000676 (0.892)
leverage	0.032*** (0.000)	0.030*** (0.000)	0.035*** (0.000)	0.032*** (0.000)	0.031*** (0.000)	0.034*** (0.000)	0.033*** (0.000)	0.032*** (0.000)	0.036*** (0.000)	0.033*** (0.000)	0.032*** (0.000)	0.035*** (0.000)
Lnasset	-0.0052*** (0.000)	-0.005*** (0.000)	-0.006*** (0.000)	-0.005*** (0.000)	-0.005*** (0.000)	-0.006*** (0.000)	-0.005*** (0.000)	-0.005*** (0.000)	-0.006*** (0.000)	-0.005*** (0.000)	-0.005*** (0.000)	-0.006*** (0.000)
Growth	0.015*** (0.000)	0.015*** (0.000)	0.014*** (0.000)	0.015*** (0.000)	0.015*** (0.000)	0.014*** (0.000)	0.015*** (0.000)	0.015*** (0.000)	0.014*** (0.000)	0.015*** (0.000)	0.015*** (0.000)	0.014*** (0.000)
Observations	2746	2746	2746	2746	2746	2746	2746	2746	2746	2746	2746	2746
Adjusted R-squared	0.559	0.561	0.561	0.564	0.565	0.565	0.560	0.561	0.561	0.565	0.567	0.565
F	387.6***	390.3***	390.1***	297.0***	298.4***	298.4***	388.7***	391.5***	391.1***	298.1***	300.2***	298.4***

Note: \*\*\*, \*\*, \*stand for significance levels of 1%, 5%, 10%, respectively (two-tailed)

Table 4 lists the multiple regression results of the Model (5). The variable Holding (the first shareholder shareholding) represents ownership concentration (CH) from the Model (5-1) to the Model (5-6). The variable Herfindahl5 (the sum of squares of top 5 shareholders Holding) represents ownership concentration (CH) from the Model (5-7) to (5-12). In the Model (5-1), Model (5-4), Model (5-7) and Model (5-10), the explanatory variable (PMC) is Herfindahl-Hirschman index (HHI). In the Model (5-2), Model (5-5), Model (5-8), and Model (5-11), the explanatory variable (PMC) is the number of listed company in the industry (LNN). In the Model (5-3), Model (5-6), Model (5-9), Model (5-12), the explanatory variable (PMC) is Lerner Index (PCM). The results show that goodness-of-fit of all adjusted models is over 50%, and F value is significant. Table 3 shows that: (1) The variable | DACC | of state-owned companies has no significant relationship with Herfindahl-Hirschman index (HHI), but this variable has significant negative correlation relationship with the variable LNN (the number of the listed company), which shows that for non-state-owned enterprise, competitive market reduce the information asymmetry, and reduce the earnings management motivation to a certain extent. This results support hypothesis H2a. (2) The variable | DACC | is significantly positively related to Lerner Index (PCM, competitive status), which demonstrates that for the non-state-owned enterprises, managers in the companies with strong product market status have strong earnings management

motivation. This results supports hypothesis H2b. (3) The variable | DACC | has significant positive correlation with the variables holding and Herfindahl5, which shows that the more concentrated ownership, the more motivation managers have to manipulate earnings. (4) Considering the regulation of ownership concentration, the result reflects that interaction coefficient of Lerner Index and the variable ownership concentration (CH) is positive, which shows that ownership concentration can increase the effect of product market competition status on the earnings management level. This results support H3b. But the empirical results do not support the hypothesis H3a.

The results of the Table 3 and Table 4 shows that competitive market has no impact on earnings management in state-owned companies, while non-state-owned companies in more competitive markets have less incentives to engage in earnings manipulation. Results also show that all kinds of companies with higher status in product market tend to incur higher level of earnings management. Moreover, for non-state-owned companies, concentrated ownership structure weakens the effect of product market competition but strengthen the effect of market status on earnings management.

## V. CONCLUSION AND SUGGESTION

This article selects Shanghai and Shenzhen listed companies between the year 2008 and 2012 as the research samples and gets 6510 samples, for studying the effects of

product market competition on the incentives to engage in earnings manipulation in companies with different ownership type. This article uses adjusting model of Jones in Xia's literature to measure the level of earnings management. The results show that the product market competition can reduce managers' earnings management motivation to a certain extent for non-state-owned companies, but has little impact on the state-owned enterprises; the higher the enterprise's competitive status, the more earnings management motivation the managers have; ownership concentration can increase the effect of product market competition status on the earnings management level for non-state-owned companies.

According to the results in this article, researchers proposed three suggestions: (1) Under the condition of the lack of effective internal governance mechanism, the idea that relying on the external market environment to restrain managers earnings management behavior can not make sense. The state-owned enterprises should focus on solving the problem of owner absence, and establish an effective internal governance mechanism to prevent the occurrence of insider control; (2) the introduction of industry competition for avoiding monopolies can restrain the managers' earnings management behavior and improve the quality of enterprise surplus information; (3) non-state-owned enterprises with ownership concentration should focus on whether the major shareholders conspire with managers to hide the real surplus information. This article also has limitations and shortcomings, as it does not divide earnings management into real earnings management and accrued earnings management, which leads to the conclusion a little rough.

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