A study on the impact of listed companies' strategies on surplus sustainability

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Abstract. Strategic differences have an important impact on the quality of surpluses. Based on the perspective of surplus persistence, this paper uses a total of 8917 data of A-share listed companies in Shanghai and Shenzhen in China from 2014-2019 as the research sample, and uses a first-order linear autoregressive model to explore the relationship between strategic differences and surplus persistence of listed companies, and the moderating role of property rights nature in this relationship. The study finds that the greater the strategic differences, the lower the surplus persistence; the negative relationship between strategic differences and surplus persistence is more significant in non-state-owned enterprises compared to state-owned enterprises. Further breakdown of the surplus items reveals that strategic differences affect the overall surplus persistence mainly by influencing the persistence of the accrual part of the surplus.

Keywords: Strategy Differences; Surplus Sustainability; Nature of ownership.

1. Introduction

Enterprise strategy is a series of holistic and long-term plans made by enterprises as economic subjects based on comprehensive analysis of internal conditions and external environment. In the process of growth of each industry, it will steadily develop into a fixed market, and the strategic decisions made by all enterprises in the same industry will gradually converge, and a "default" strategic pattern will naturally form in the industry. In order to survive in the competition, many enterprises will choose this industry conventional strategy, but some enterprises find another way to break away from the industry conventional development mode, and choose to deviate from the industry conventional differentiation strategy, in order to obtain more opportunities for survival and development. In recent years, with the advent of the digital era and the continuous development of economic globalization, more emerging markets, enterprises face increasingly fierce competitive pressure at home and abroad, and the outbreak of the Sino-US trade war, the economic situation in China has a greater impact. Due to the pressure of survival, more listed companies attempt to choose differentiated corporate strategies to plan their prospects, development goals and resource allocation from a strategic height in order to maintain competitiveness and improve their market position. However, at the same time, some studies have shown that the increase of corporate strategy differentiation will bring uncertainty to enterprises, and this uncertainty may bring greater benefits to enterprises, but it is also likely to lead them to failure.

With the development of China's capital market and the strengthening of risk awareness of relevant investors, stakeholders in the market are increasingly concerned about the surplus information disclosed by listed companies, but it is difficult for ordinary investors to directly understand the true operating conditions of the company, and make investment decisions through information that can only be disclosed by the listed company on its own initiative to the public, such as annual reports and company announcements. However, in the case of information asymmetry, corporate managers may apply the accounting policies used to prepare financial reports to selectively manage surplus and whitewash financial statements so that they do not truly reflect the financial position and operating results of the company. Surplus sustainability has been one of the important indicators for investors to measure the quality of listed companies. It has been shown that sustainable surpluses imply a high quality of corporate financial reporting and that surplus sustainability is positively correlated with company value, thus facilitating investors to price stocks correctly and reflect their decision value.

Thus, information related to accounting surplus is increasingly of interest to the community and relevant stakeholders.

2. Research Hypothesis

2.1. Impact of strategy differences on surplus sustainability

Dimaggio and Powell found that each industry develops a set of industry conventional strategies after a process of imitation and mutual learning among firms, regulation of the industry regulatory system, and taking strategic advice from experts. Firms that mimic industry conventional strategies face less risk and uncertainty and are less likely to experience fluctuations in firm performance. Thus, their surplus persistence will be higher.

The degree of strategic variance indicates the extent to which a company's strategy deviates from the industry's conventional strategy, and companies with high strategic variance will have an impact on their surplus sustainability. Strategic variance affects surplus sustainability through both production operations and financial information generation.

On the production operations side, the degree of company strategic variance has a significant impact on operating performance. It has been confirmed that the greater the strategic variance of a firm, the higher the frequency of performance fluctuations. The internal logic of strategic differences affecting corporate performance is that, on the one hand, companies with large strategic differences have greater uncertainty in their operations because they have no experience to learn from and have to rely on their own experience to draw lessons, thus increasing the cost of bonds and bringing about an increase in the overall cost of capital, leading to an increase in corporate financial risk, which in turn brings about fluctuations in corporate operating performance by acting on operational activities. On the other hand, the greater the degree of variation in corporate strategies, the more stakeholders will remain cautious about their investment decisions, confidence in the firm decreases, and the cost of corporate financing increases, thus making the operational risk increase, which tends to bring extreme performance, which may be either extremely good performance or extremely poor performance, but either good extreme performance or poor extreme performance will bring corporate performance volatility, which in turn reduces the firm s surplus sustainability. Based on this, it can be concluded that companies with large strategic differences have more frequent performance fluctuations and lower surplus persistence.

In terms of financial information generation, it has been shown that the main reason for low surplus persistency is the lower persistence of the accrual component of the surplus. Companies with large strategic differences engage in more surplus management. On the one hand, firms with excessive strategic differences have an incentive to engage in surplus management in order to mask strong fluctuations in performance. On the other hand, the greater the deviation of corporate strategy from the industry's conventional strategy, the greater the lack of available experience and the more difficult it is for external information users to assess the business situation and measure the value of the firm based on industry information and existing experience, and the higher the degree of information asymmetry between the two. According to the theory of information asymmetry, investors with information disadvantage have less information about the company than managers with information advantage. The higher the degree of information asymmetry, the greater the difference in the amount of information obtained between the two, the more difficult it is for investors to supervise listed companies. Based on this, surplus management by listed companies is less likely to be detected, and there is more motivation and space for surplus management, which encourages opportunistic behavior of managers. Kangtao Ye et al. found that the greater the difference in corporate strategies, the more likely accrual surplus management, rather than cash flow surplus management, is carried out. And accrual surplus management is mainly achieved by changing the time distribution of the accrual part of the surplus so that the surplus persistence of accruals is reduced, which in turn reduces the overall surplus persistence. In summary, the following hypotheses can be formulated:

H1:The degree of difference in company strategy is negatively related to surplus persistence, and the greater the degree of difference in strategy, the lower the surplus persistence.

2.2. The effect of the nature of ownership on the relationship between strategic differences and surplus persistence

In China, the nature of property rights plays an important role in the management and strategic decisions of firms, so the property rights attributes of firms need to be considered when studying the impact of strategic differentiation on surplus persistence. Compared with non-SOEs, SOEs have an absolute advantage both in terms of access to resources and in terms of the diffusion of political influence.

On the one hand, in China, due to the role of "natural ties" between SOEs and the government, SOEs have closer ties with officials, and even some SOE executives have served or are serving in the government, making SOEs more advantageous in terms of resource access and product entry, and enjoying more policy preferences, such as the government through direct financing or mergers and acquisitions of high-quality assets to facilitate financing for SOEs. Due to the inclination of state policies, non-SOEs get multiple obstacles in issuing stocks, long-term borrowing, and debt financing, higher market friction costs, lack of various resource advantages, and bring more competitive pressure. In order to enhance their products, services and image in the fierce market competition, non-state enterprises will pay more attention to adopt differentiation strategies, innovation and new product development in order to gain competitive advantages and consolidate or improve their market position. The adoption of differentiation strategy also requires enterprises to pay more operating costs and brings higher operating risks, which has a more significant impact on surplus sustainability. In contrast, state-owned enterprises (SOEs) are supported by the government and receive better resource allocation, which reduces their operating risks and thus the impact of strategic differences on surplus sustainability is weaker. Therefore, the effect of strategic differences on surplus persistence is not significant among SOEs, while the negative effect of strategic differences on surplus persistence is more significant among non-SOEs.

On the other hand, SOEs have been in a monopoly position in industries such as national livelihood and security, and also have social responsibilities such as maintaining social stability, reducing unemployment, and promoting local economic growth, and will be more strictly regulated by the SEC, SASAC, and the state audit department, so SOEs' strategic decisions are limited by national policy burdens and are more likely to form industry-consistent strategies. At the same time, the government can directly veto high-risk investment projects of SOEs and interfere with their strategic decisions according to the relevant system in order to achieve its goals. As a result, SOEs will favor low-risk strategies when formulating their strategies, prompted by the government's objectives, which in turn inhibits the negative effect of strategic differentiation on surplus persistence. In contrast, managers of private firms are usually chosen by shareholders, and corporate managers, as agents, are more inclined to choose differentiated strategies in order to obtain higher performance, and the effect of strategic differentiation on surplus persistence is more significant. Based on the above analysis, the second hypothesis of this paper can be formulated:

H2: The nature of property rights moderates the relationship between the degree of strategic differentiation and surplus persistence, and the negative relationship between strategic differentiation and surplus persistence is more significant in non-state-owned firms compared to state-owned firms.

3. Study design

3.1. Sample and Data

Based on the need of research design, the surplus data required in this paper is one year more than the strategic data, so the surplus data comes from A-share listed companies in Shanghai and Shenzhen from 2014-2019, and the strategic data comes from A-share listed companies in Shenzhen and Shanghai from 2015-2019. The specific sample data screening process is as follows: firstly, the

financial and insurance industry samples are excluded because the financial data of companies in the financial and insurance industry are not comparable with those of other industries; secondly, ST and *ST companies are excluded because the financial characteristics of these two types of companies are unstable; then the samples with missing variable data are excluded; finally, the tailing process is carried out to eliminate the extreme values of the upper and lower 1%, and finally 8917 sample data are obtained. Except for the listing time of listed companies from the wind database, the data of surplus persistence, strategic difference degree, property rights nature and other control variables are all from the Guotaian database, and stata software is used for data processing.

3.2. Variable Definition

3.2.1 Explained variable: surplus persistence

There are various methods to measure the persistence of surplus, but the first-order linear regression model is commonly used at home and abroad to measure the persistence of surplus. Therefore, this paper also adopts a first-order autoregressive model to measure surplus persistence by using the regression coefficient of current period's surplus on next period's surplus. The accounting surplus is measured by using the net asset margin of the company, and the basic model is as follows:

$$ROA_{t+1} = \beta_0 + \beta_1 ROA_t + \varepsilon \quad (1)$$

In model (1), ROA_{t+1} represents the next period's surplus and ROA_t represents the current period's surplus. If the coefficient β_1 of ROA_t is significantly positive, it means that the current period's surplus can be carried over to the next period and the surplus has sustainability, and the larger β_1 is, the higher the surplus sustainability is.

3.2.2 Explanatory variables: strategic differences

The selection of strategy variance indicators mainly refers to the measures of Geletkanycz and Hambrick, Kangtao Ye and Shanshan Zhang, etc. Geletkanycz et al. used six indicators of capital intensity, fixed asset renewal, period cost input, corporate financial leverage, advertising input, and R&D input to measure corporate strategy, however, due to the unavailability of advertising input and R&D input data are not available, Kangtao Ye et al. replaced advertising input and R&D input with cost of sales and net intangible assets, respectively, according to the actual situation in China, and used the improved six indicators to measure strategy (Table 1), and further calculated to obtain the strategic variability of enterprises.

Table 1 Corporate Strategy Indicators

Indicators	Formula
Capital Intensity	Fixed Assets / Number of Employees
Fixed assets renewal degree	Net value of fixed assets / Original value of fixed assets
Period cost input	Administrative expenses/operating income
Corporate Financial Leverage	(Short-term loans + long-term loans + bonds payable)/net assets
Selling expense ratio	Selling expenses/operating income
Intangible assets as a percentage	Net intangible assets/operating income

First, the six indicators are standardized according to industry and year, i.e., each indicator of the year is subtracted from the industry average and divided by the industry standard deviation, and then the absolute value is taken; secondly, the six strategic indicators standardized for each company are averaged to obtain the strategic difference index STD, the larger the index is, the greater the strategic difference between the company and the same industry of the year.

3.2.3 Moderating variable: nature of property rights

The samples of listed companies are divided into state-controlled listed companies and non-state-controlled listed companies according to the nature of their equity, and a dummy variable is set based on the state-controlled companies, which takes the value of 1 if it is a state-controlled company and 0 otherwise.

3.2.4 Control variables

In the process of empirical testing, control variables were selected based on existing research on the factors influencing surplus persistence, and the relevant control variables were selected and the reasons for them are as follows:

Firm size (Size): Sun Shipan et al examined the impact of corporate governance on corporate accounting surplus persistence and found that firm size is an important factor influencing accounting surplus persistence, and the larger the firm size, the higher the surplus persistence.

The higher the gearing ratio is, the weaker the solvency of the company and the greater the financial risk it faces, which will cause fluctuations in surplus and poorer surplus sustainability.

Age of listing: On the one hand, companies that have just gone public have unstable financial characteristics and poor surplus sustainability; on the other hand, companies that have entered maturity or even recession have limited development and their surplus sustainability will also tend to weaken.

Growth (Gro): Shaobing Peng found by studying the relationship between information reliability, corporate growth and accounting surplus persistence that corporate growth has a significant role in the surplus persistence of accrual items.

Hold: Song et al. studied the "convergence of interests" effect of executive shareholding, and the higher the percentage of executive shareholding, the higher the company's surplus persistence.

High-quality audits (Big): External audits play an important supervisory role for companies, among which the international Big Four audits are representatives of high-quality audits, which can affect the surplus sustainability of listed companies. Wenda Liu et al. found that companies audited by Big 4 firms exhibit higher surplus persistence compared to companies not audited by Big 4 firms. The variables were calculated as shown in Table 2:

Table 2 Description table of related variables

Type	Variable	Name	Calculation method
Explained variable	ROA	Surplus Sustainability	Net profit / Average total assets
Explanatory variable	STD	Strategy Differences	Six comprehensive indicators
Adjustment variable	SOE	Nature of ownership	Defined as 1 if it is a state-owned holding company, 0 otherwise
Control variable	Size	Company Size	Natural logarithm of total assets
	Lev	Gearing ratio	Total liabilities / total assets
	Age	Number of years on the market	Number of years the company has been listed to date
	Gro	Growth	Operating income growth/prior year operating income
	Hold	Executive Shareholding	The sum of the shareholdings of directors, supervisors and senior management of the Company
	Big	High Quality Audit	If it is an international Big Four audit, take 1, otherwise take 0
	Year	Year	Yes
	IND	Industry	Yes

3.3. Model design

There are three main methods to measure surplus persistence: time series modeling method, financial statement information analysis method, and first-order linear regression equation modeling method, but the first-order linear regression equation modeling method, which uses the current

period's surplus to predict the next period's surplus and uses the regression coefficients to represent surplus persistence, is more frequently used at home and abroad. This paper draws on the method of Freeman, Sloan, and Rountree to measure surplus persistence, i.e., the first-order autoregressive modeling method. To test the effect of differences in firm strategies on surplus persistence, this paper draws on previous studies and develops the following model for regression:

$$\mathrm{ROA}_{t+1}=\beta_0+\beta_1\mathrm{ROA}_t+\beta_2 STD+\beta_3 STD*\mathrm{ROA}_t+\beta_4 SOE+\beta_5 Size +\beta_6 Lev+\beta_7 Age+\beta_8 Gro+\beta_9 Hold+\beta_{10} Big+\sum\mathrm{Year}+\sum\mathrm{IND}+\varepsilon \quad (2)$$

Model (1) indicates a negative relationship between strategy differences and surplus persistence if β_3 is significantly negative, then hypothesis 1 holds.

To verify the effect of the nature of ownership on the relationship between strategic differences and surplus persistence, the listed companies are classified by the nature of ownership into state-owned holding companies and non-state-owned holding companies, and then the regressions of model (2) are conducted separately. Hypothesis 2 holds if β_3 is more significant in the non-state holding company sample compared to the state-owned holding company sample.

4. Empirical Analysis

4.1. Descriptive statistics

Table 3 shows the results of descriptive statistics for the main variables. From the mean value of ROA_{t+1}, the average net asset margin of the sample companies is 0.032 and the standard deviation is 0.056, which indicates that the profitability of the sample companies varies widely. The minimum value of Strategic Difference (STD) is 0.145 and the maximum value is 2.977. From the extreme value, the degree of strategic difference of different companies varies greatly, but from the mean value, the mean value of strategic difference is only 0.571, which indicates that most companies' strategies do not differ much from the conventional strategies of the industry. The difference between the maximum value of 26.302 and the minimum value of 20.241 for enterprise size (Size) is not significant, which indicates that the size of the sample companies is relatively average. The difference between the minimum and maximum values of the balance sheet ratio (Lev) is large, but the average value is 44.9%, which is more reasonable. Looking at the other control variables shows that the standard deviations of years on the market (Age), company growth (Gro), executive shareholding (Hold), and high quality audit (Big) are 7.081, 0.386, 0.153, and 2.232, indicating that the years on the market, growth, executive shareholding, and audit quality vary widely across companies.

Table 3 Descriptive statistics results

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA_{t+1}	8917	0.032	0.056	-0.261	0.165
ROA_t	8917	0.038	0.046	-0.148	0.167
STD	8917	0.571	0.401	0.145	2.977
Size	8917	22.454	1.239	20.241	26.302
Lev	8917	0.449	0.181	0.103	0.867
Age	8917	14.649	7.081	4	28
Gro	8917	0.188	0.386	-0.478	2.276
Hold	8917	0.098	0.153	0	0.61
Big	8917	0.057	0.232	0	1

4.2. Analysis of regression results

4.2.1 Hypothesis 1 Empirical analysis

Table 4 reports the regression results of the relationship between corporate strategy differences and surplus persistence. It can be observed that, firstly, the regression coefficient between ROA_t and ROA_{t+1} is 0.53 and is significantly positively correlated at 1% level, which verifies that the prior

period surplus can significantly explain 53% of the current period surplus and listed companies have surplus persistence characteristics. Secondly, observing the cross product term of ROA_t and STD, we can see that the regression coefficient of the cross product term is -0.073 with a significance level of 5%, which verifies that the strategy difference is significantly and negatively related to the surplus persistence and hypothesis 1 holds. In terms of control variables, the correlation coefficients of Size, Lev, Age, Gro, Hold and Big are significant, which validates the choice of control variables, while the adjusted R^2 after adding control variables increases from 0.2563 to 0.3443, with a better fit.

Table 4 Main regression results

	Return to Basics		Add control variables	
Explanatory variables	Correlation coefficient	T-value	Correlation coefficient	T-value
ROA_t	0.607***	17.05	0.533***	22.89
STD	-0.015***	-4.85	-0.012***	-7.71
ROA_t*STD	-0.037	-0.59	-0.073**	-2.14
Size			0.006***	10.90
Lev			-0.080***	-23.35
Age			0.001***	3.79
Gro			0.028 ***	22.05
Hold			0.009**	2.36
Big			0.005**	2.24
Cons	0.018***	10.03	-0.086***	-7.16
Year		Yes		
IND		Yes		
Obs		8917		
Adj R^2	0.2563		0.3443	

Note: ***, **, * denote significant at the 1%, 5%, and 10% levels, respectively. Same as below.

4.2.2 Hypothesis 2 Empirical analysis

Table 5 shows the regression results of the relationship between strategy differences and surplus persistence according to the nature of corporate ownership grouping. It is found that the regression coefficient of the cross product term ROA_t*STD is -0.02 in the sample of SOEs, which is negative but insignificant. In contrast, the regression coefficient of the cross product term in the sample of non-SOEs is -0.16, which is significant at the 1% level. Thus hypothesis 2 is tested.

Table 5 Regression results for subgroups

	State Enterprise		Non-State Enterprise	
Explanatory variables	Correlation coefficient	T-value	Correlation coefficient	T-value
ROA_t	0.349***	13.54	0.442***	16.71
STD	-0.002**	-2.24	-0.0158***	-7.96
ROA_t*STD	-0.021	-0.79	-0.163***	-5.38
Size	0.006***	8.09	0.013***	11.20
Lev	-0.098***	-16.93	-0.119***	-17.48
Age	-0.001	-0.54	-0.001	0.32
Gro	0.001	1.48	0.002***	4.57
Hold	-0.114***	-3.09	0.028***	4.84
Big	0.003	1.04	0.007	1.11
Cons	-0.094***	-4.93	-0.247***	-9.25
IND		Yes		
Obs	3272		5,645	
Adj R^2	0.2642		0.2082	

4.3. Further analysis

Sloan and Richardson et al. argue that surplus consists of accruals and cash flow items, and that the persistence of the accrual portion of surplus is significantly lower than that of the cash flow portion of surplus. Accrual-based surplus management of accrual items refers to the use of accounting policy

choices and changes in accounting estimates to affect the current surplus without violating corporate accounting standards; real surplus management based on cash flow surplus refers to the manipulation of cash flows by changing the timing of the firm's operating, investing, and financing activities . It has been shown that companies with a high degree of strategic variability are more likely to choose accrual-based surplus management and less likely to choose real surplus management to manipulate the accrual-based surplus by changing the timing distribution of accruals so that the accrual portion of the surplus is less persistent and thus the cash flow surplus appears more stable than the accrual-based surplus. Accordingly, the following hypothesis is proposed:

H3: Accrual surplus has a more significant negative relationship with strategy differences compared to cash flow surplus.

In order to verify the effect of strategic differences on the persistence of both parts of the surplus, models (3) and (4) are established for regression. Where AE represents accrued surplus, measured by net operating cash flow/total assets, and CE represents cash flow surplus, measured by (net income - net operating cash flow)/total assets, with the same control variables as in model (2).

$$\mathrm{AE}_{t+1}=\beta_0+\beta_1\mathrm{AE}_t+\beta_2 STD+\beta_3 STD*\mathrm{AE}_t+\beta_4 SOE+\beta_5 Size+\beta_6 Lev+\beta_7 Age+\beta_8 Gro+\beta_9 Hold+\beta_{10} Big+\sum\mathrm{Year}+\sum\mathrm{IND}+\varepsilon \quad (3)$$

$$\mathrm{CE}_{t+1}=\beta_0+\beta_1\mathrm{CE}_t+\beta_2 STD+\beta_3 STD*\mathrm{CE}_t+\beta_4 SOE+\beta_5 Size+\beta_6 Lev+\beta_7 Age+\beta_8 Gro+\beta_9 Hold+\beta_{10} Big+\sum\mathrm{Year}+\sum\mathrm{IND}+\varepsilon \quad (4)$$

Table 6 reports the results of the correlation between strategy differences and the two components of surplus, accrual surplus and cash flow surplus. The coefficient of the cross product term between AE_t and STD is -0.06, which is significant at the 1% level, while the coefficient of the cross product term between CE_t and STD is -0.01 and is not significant. It indicates that the effect of strategic differences on the persistence of the accrued surplus is more significant and hypothesis 3 holds.

Table 6 Strategy Differences and Two-Part Surplus Regression Results

	AE_{t+1}		CE_{t+1}	
Explanatory variables	Correlation coefficient	T-value	Correlation coefficient	T-value
AE_t	0.401***	31.57		
CE_t			0.192***	14.30
STD	-0.004***	-4.88	-0.002	-1.53
AE_t*STD	-0.057***	-4.65		
CE_t*STD			-0.0128	-1.48
Size	0.005***	7.12	0.005***	5.80
Lev	-0.041***	-9.88	-0.068***	-12.52
Age	0.001	1.18	-0.001	-0.20
Gro	0.001	0.34	0.001**	2.17
Hold	-0.003	-0.65	0.035***	5.34
Big	0.010	3.61	-0.011***	-2.93
Cons	-0.052***	-3.07	-0.131***	-5.83
Year		Yes		
IND		Yes		
Obs		8730		
Adj R^2	0.2101		0.0939	

4.4. Robustness test

4.4.1 Using fixed effects regression methods

In order to avoid the effect of individual differences among different listed companies, this section uses fixed effects regression to verify the robustness of the article's findings. The regression results are shown in Table 7. After controlling for individual differences, the regression results remain unchanged and the coefficients of the ROA_t and STD cross product terms remain negative and significant at the 1% level, again verifying hypothesis 1: the degree of strategic variation is significantly and negatively related to surplus persistence.

Table 7 Fixed effects regression results

Explanatory variables	Correlation coefficient	T-value
ROA_t	0.417***	21.40
STD	-0.005***	-4.59
ROA_t*STD	-0.115***	-5.56
Size	0.009***	13.28
Lev	-0.109***	-23.97
Age	0.001	1.25
Gro	0.001***	3.04
Hold	0.021***	4.17
Big	0.002	0.76
Cons	-0.150***	-9.49
Year	Yes	
IND	Yes	
Obs	8917	
Adj R^2	0.2110	

4.4.2 Replacing the measurement of strategic differentiation

For the measure of strategic variance, in order to test its stability, this section draws on Tang's method and selects only four indicators, capital intensity, fixed asset renewal, period cost input and corporate financial leverage, to measure each company's strategy for each year in 2015-2019. The measurement of each indicator is consistent with that of Kangtao Ye (2015), as shown in Table 8, and the same method as in the previous section is used to calculate the strategic differentiation degree, where each indicator is summed up after industry standardization, then the absolute value is found, and finally the strategic differentiation degree indicator of each company is obtained after averaging.

Table 8 Strategic Variance Measures in Robustness Testing

Indicator	Formula
Capital Intensity	Fixed Assets / Number of Employees
Fixed assets renewal degree	Net value of fixed assets / Original value of fixed assets
Period cost input	Administrative expenses/operating income
Corporate Financial Leverage	(Short-term loans + long-term loans + bonds payable)/net assets

Using the calculated degree of strategic variance and surplus persistence are re-regressed and the regression results are shown in Table 9. Observing Table 9, it can be seen that the coefficient of $ROA_t$is 0.59 with a significance level of 1%, indicating that the previous period's surplus can explain 59% of the current period's surplus and the listed company has surplus persistence. the coefficient of ROA_t*STD is -0.21 with a significance level of 1%, verifying that the strategic variance is significantly and negatively related to surplus persistence, which is consistent with hypothesis 1.

Table 9 Strategy difference robustness test regression results

Explanatory variables	Correlation coefficient	T-value
ROA_t	-0.069***	22.94
STD	-0.002***	-2.69
ROA_t*STD	-0.094***	-4.46
Size	0.056***	11.28
Lev	-0.324***	-20.89
Age	0.001***	5.48
Gro	0.027***	19.95
Hold	0.002	0.45
Big	0.003	1.35
Cons	-0.105***	-8.06
Year	Yes	
IND	Yes	
Obs	7103	
Adj R^2	0.3427	

5. Conclusion

This paper explores the relationship between strategic variance and surplus persistence using a sample of A-share listed companies in China. Capital intensity, fixed asset renewal, period cost investment, corporate financial leverage, cost of sales ratio, and intangible asset share are used to measure corporate strategies, which are then standardized and averaged to calculate the degree of corporate strategic variance. Using the return on assets measure of corporate surplus, a measure of surplus persistence is made by drawing on the first-order linear regression model of Sloan and others. The nature of property rights is also introduced for analysis, and the following conclusions are drawn: (1) Strategic variance is inversely related to surplus persistence in all listed companies in China, and the greater the degree of strategic variance, the lower the surplus persistence. (2) In private companies, the negative relationship between strategic differences and surplus persistence is more significant. (3) Strategic differences have an impact on surplus persistence more by affecting the accrual component of surplus.

The implications of this paper are (1) for corporate managers: With the rapidly changing market environment and rapid technological development, more and more companies are pursuing differentiation strategies in order to gain unique competitive advantages. However, companies should also avoid blindly pursuing new and different strategic models, and should assess their own strengths and industry conditions comprehensively to scientifically formulate differentiation strategies. Otherwise, they are likely to engage in surplus management in order to conceal the sustainability of low surplus brought about by the degree of strategic differentiation, which in turn will have a negative impact on corporate reputation. (2) To stakeholders: Stakeholders outside the company can learn that the strategic differentiation and surplus sustainability of listed companies have a negative correlation, so they should pay more attention to the company's strategic information before making investment decisions and be wary of the negative impact caused by excessive strategic differentiation. (3) To government departments: This paper finds that the negative correlation between strategic difference and surplus persistence is more significant in private enterprises, thus it can make suggestions on corporate ownership reform from another level: promote the listing of state-owned enterprises; introduce state-owned shares to private enterprises appropriately to reduce the business risks of enterprises, thus making absolute state-owned control, relative control or There are more and more listed companies with the participation of state-owned capital.

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