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## Regional competitive inertia and performance of Chinese firms: mediation of post-merger synergy

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### ABSTRACT

This paper reveals that, under the market fragmentation, Chinese integrating firms have to compete with lots of regional firms in different regions. To gain advantages, firm needs to apply regional repertoires with regional competitive behavior. This paper examines the relationship between regional repertoire and performance, and found out that inertia of regional repertoire is positive associate with performance, which is opposite to the western scholar's theory. Meanwhile, this paper also explore the mediating effects of post-merger synergy, including operation synergy, sales synergy, management synergy and financial synergy, between regional inertia and performance. © 2013 Trade Science Inc. - INDIA

### KEYWORDS

Regional repertoire;  
Competitive inertia;  
Post-merger synergy.

### INTRODUCTION

Since China joining the WTO, Chinese firms have engaged an important development goal, which is enhancing international competitiveness and turning to be the world-class enterprises<sup>[1]</sup>. To achieve this, firms need a series of horizontal and vertical integration<sup>[1]</sup>. But during the integration, Chinese firms have to face the regional variety caused by market fragmentation<sup>[2]</sup>. The market fragmentation refers to the regional market variety because Chinese governmental authorities are overweighted in local (city or provincial) level. The market fragmentation protects and supports a lot of regional firms<sup>[3]</sup>. These firms, in each regional market, will attack integrating firms with both market and non-market competitive behavior<sup>[4]</sup>. This "multi-market simultaneous competition" turns to be an important character in dy-

namic competition of Chinese firms.

To compete with a boundary of regional firms in different regions and achieve advantages, Chinese integrating firms have to apply a series of competitive actions in different types and regional scopes, which called regional repertoire. Then what character of regional repertoire should be chosen become a strategic issue in this dynamic competition. On this issue, previous researches often discuss with the competitor analysis, market structure and so on, but seldom discussed about the mediation or moderation effects of organizational mechanism and management model between repertoire and performance. In the reality, the question of which kind of the management model is suitable for the appropriate repertoire is beneficial for Chinese firms gaining advantages under the special "multi-market simultaneous competition". This paper attempted to discuss the rela-

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relationship of synergy of Chinese firm merger or integration, the regional repertoire and the performance.

### LITERATURE REVIEW

#### Competitive Repertoire

Researches on dynamic competition mainly explores the character and rules of competitive behavior under more and more dynamic environment<sup>[5]</sup>. Recently scholars focus on competitive repertoire. A boundary of competitive actions form a repertoire<sup>[9]</sup>. About repertoire, scholars' attentions are gather around the competitive inertia and complexity<sup>[6]</sup>. Competitive inertia refers to the activity and flexibility of a firm applying any competitive action<sup>[8]</sup>. Many researchers thought that inertia have relationship with the bureaucracy of structure, preference, and organizational network of a firm<sup>[10]</sup>. Some other researchers also argue that the top management team<sup>[11]</sup>, inner information process<sup>[7]</sup> can decrease inertia. And reducing inertia means to firm enhancing its flexibilities and not relying on one single strategy<sup>[8]</sup>. Therefore the less inertia, the better performance a firm can get<sup>[8]</sup>. However, over-reduce inertia will cause more costs in organizational learning, and also enhance the costs in communicating with suppliers and dealers.

#### Post-merger synergy

The resource-based view (RBV) thinks that the essential of all enterprises integration (merger, et al.) is for gaining resources and capabilities<sup>[13]</sup>, and better reverses. Here, by "better", it means the "2+2=5", which refers to the more total value created by integrated units than the sum of value of each units independently. This is what synergy means<sup>[14]</sup>. Synergy indicates that resources are allocated more effectively<sup>[15]</sup>. Therefore the post-merger synergy, while a firm regarded as a system, keeps the balance between the merging and target firms. Ansoff (1988)<sup>[12]</sup> forwardly proposed that there are four dimensions in a firm integrating system: operating synergy (O-synergy), sales synergy (S-synergy), management synergy (M-synergy), and financial synergy (F-synergy). Operating synergy indicates the human resource, labor and facilities are effectively applied in the production process. Sales synergy indicates the systematic and united management of sales and channel management which make all products of a firm sharing

one channel, advertising, brands and so on. Management synergy indicates the sharing and coordination of strategy, organization, and operation management. Financial synergy comes from the efficient allocation of capital of a firm, including the integrating of offices, research resources, machines and other facilities. The four dimensions of synergy have affects to competitive actions.

### HYPOTHESIS

In such special competition environment, Chinese firms have to choose the inertia and complexity of its regional repertoire, according to its resources and capabilities, and to its organizational mechanism. Former studies show that inertia has negative associate with performance. But we think that higher regional inertia may have better performance for Chinese firms. Because competing with a boundary of regional competitors is not a "quicker makes better" game. Chinese integrating firm have to separate their resources into different regional market. So the lower inertia, the higher communicating costs the firm has to pay with limited resources.

**H1: Regional Competitive inertia have positive associate with performance.**

Synergy of post-merger will have influence on that association. Firm should lower the regional inertia to get better performance, while the system synergy can support such competitive repertoire. Firstly, operation synergy improves firm sharing and coordinating resources during the value chain, which promotes firm's abilities in getting along with local suppliers and dealers. And more over, firm with higher operation synergy will be more effective in integrating various social resources<sup>[16]</sup> in different regional market, and will be more flexible in each regional market<sup>[17]</sup>. Therefore, if with actions of lower inertia, a firm could enhance the interaction and learning with relatives in each regional market, as to enhance the operating effectiveness and performance<sup>[12]</sup>.

Secondly, sales synergy engages the uniting and sharing between regional markets, including sales management, and advertisement<sup>[13]</sup>. But in "multi-market simultaneous competition", Chinese firms have to protect the autonomy of their regional offices to keep them

more space and power to react any emergent incident in each regional market. Therefore control sale synergy could be a highly effective way to enlarge performance.

Thirdly, enhancing inertia of regional repertoire can meanwhile enhance the coordination of the whole organization and management, which means damaging management synergy. Because management synergy is too strengthen the coordination and centralization of organization, ignoring autonomy of each regional office.

Finally, enhancing inertia means regional offices relying on local resources and capabilities. Therefore, the financial management could be more effective. And enhancing financial synergy could be the better idea for supporting inertia decreasing.

H2a :operation synergy has mediating effects between regional inertia and performance.

H2b :sales synergy has mediating effects between regional inertia and performance

H2c :management synergy has mediating effects between regional inertia and performance

H2d :financial synergy has mediating effects between regional inertia and performance

## SAMPLES AND DATA

### Samples and data collection

We chose Chinese airline and white wine industries to gather samples. To ensure the reliability of this research, we pick some corporate listed in the Chinese stock market (6 airline companies, and 10 white wine companies) as sample. We gather all news involving competitive actions of these firms during 2001 to 2010, and following Chen and Miller (1994)<sup>[18]</sup> to analysis by structural content analysis. We categorize competitive actions in two dimensions: 1) according to the type of action, there are 8 types of action, including proposing new technology, proposing new product, entering new market or starting new store, changing market network or pattern, investment or merger, cooperation or alliance, and changing prices; 2) according to the scope and area the action are reported to take place, we also separate all actions into national and regional. In all firms in white wine industries, there are 536 actions, in which 156 are cognized as regional. In the 842 actions of firms in airline industries, 421 are cognized as regional.

### Variables

Dependent variable: This paper use ROA (Return of Asset) as index of performance<sup>[19]</sup>.

Independent variables: Competitive inertia. Competitive inertia refers to the level of activity that a firm demonstrates in altering its competitive stand. It reflects the number of market-oriented changes a company makes in trying to attract customers and outmaneuver competitors. (Miller & Chen, 1994)<sup>[8]</sup>.

This article uses the activity index to measure the competitive inertia, which followed the methods of measurement of Miller and Chen (1994)<sup>[8]</sup>. Assume in year  $t$ , the number of decision-making to take a  $j$  type action for a certain  $i$  company is  $x_{i,j,t}$ . Each year, the number of different types of decision-making is different. So all companies' and all years' value were standardized to. Sum the standardized scores, divided by the logarithmic of business operations scale, and then seek the logarithm, this variable showed normal distribution:

$$ActivityIndex = \ln \left[ \left( \sum_j z_{i,j,t} \right) / \ln (OperationScale_{i,t}) \right] \quad (1)$$

Value the activity index in the opposite symbol, in order to measure the competitive inertia.

Mediating variables: post-merger synergy can be separated into operation synergy (o-synergy), sales synergy (s-synergy), management synergy (m-synergy), and financial synergy (f-synergy). No matter how a firm engages synergy, the transaction costs and other management costs will be reduced<sup>[20]</sup>. Therefore, the four ratios of expenses (ratio of operation expense, ratio of sales expense, ratio of management expense, and ratio of financial expense) can be regarded as agent variables, respectively, of o-synergy, s-synergy, m-synergy, and ff-synergy.

Control variables According to previous researches, we pick four control variables: size of firm, age of firm, current profit, and prior profit<sup>[11]</sup>.

## RESULTS AND CONCLUSION

According to the basic standards judging mediation effects<sup>[21]</sup>, we took a general linear regression with SPSS 16.0, and the results are shown in TABLE 1. As TABLE 1, the regional inertia have significant positive

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effect on performance, then H1 is testified. And also, operation synergy, sales synergy, and financial synergy are reported to have significant mediating effects between regional inertia and performance, so H2a, b, and d are testified.

Table 1: General Linear Regression Results

	ROA	O-synergy	S-synergy	M-synergy	F-synergy	ROA
Control						
Prior-profits	0.127†	-0.146*	-0.097	0.048	-0.217*	-0.057
Size	0.231	-0.233	0.044	0.155	-0.785***	-0.086
Age	0.152*	-0.046	0.197*	-0.173*	0.178*	0.152**
Profits	0.587***	-0.36***	0.008	0.116	-0.212*	0.26***
Independent						
Inertia	0.272*	-0.424***	0.474**	0.051	-0.54***	-0.085
O-synergy						-0.873***
S-synergy						-0.239***
M-synergy						-0.257***
F-synergy						-0.209**
R square	0.571	0.63	0.28	0.381	0.454	0.845
F	13.625***	17.394***	3.973***	6.279***	8.516***	36.997***

\*\*\*. Regression is significant at the 0.001 level (2-tailed).

\*\*. Regression is significant at the 0.01 level (2-tailed).

\*. Regression is significant at the 0.05 level (2-tailed)

†. Regression is significant at the 0.1 level (2-tailed)

Dynamic competitive behavior values highly to a firm, especially in the market fragmentation environment of China. Every action is not only based on special resource, but also relied on a certain organizational mechanism and model. Therefore an integrating firm has to design a reasonable post-merger synergy to better support applying appropriate actions, and then gain advantage. This paper indicates that, under market fragmentation, firm needs to keep inertia of regional competitive repertoire in a higher level, not simply as western scholar think to reduce it, to have better performance. Also, this paper examines the mediating effects between regional inertia and performance. When enhancing regional inertia, lowering ratio of expenses in operation, sales management, and financial management could be effective way to help and gain better performance. This provides some practical advices to Chinese integrating firms. A firm can enhance operation synergy by promote the business process engineering, enhance sales synergy by standardize marketing in all regions, and enhance financial centralization by gathering accounting authorities into head quarter. By doing these, an integrating firm can reduce the regional inertia and build advantages in scale, scope, and innovation.

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## REFERENCES

- [1] Hailin Lan; *Strategic Behavior of Chinese Enterprises in Transferring Economy*. Guangzhou, South China University of Technology Press, (2007).
- [2] A.Young; *The Razors Edge: Distortions and Incremental Reform in the People's Republic of China*. Quarterly Journal of Economics, **115(4)**, 1091-11351 (2000).
- [3] Yifu Lin, Peilin Liu; *Local Protection and Market Fragmentation: Perspective of Development Strategy*. Discussion of China Study Center in Beijing University, **10**, C2004015 (2004).
- [4] Z.Tian, S.Fan; *Competitive interaction A study of corporate market and non-market behaviors in Chinese transitional environment*. Journal of Chinese Economic and Foreign Trade Studies. **1(1)**, 36-48 (2008).
- [5] M Chen, I.MacMillan; *Non-response and delayed response to competitive moves: The roles of competitor dependence and action irreversibility*. Academy of Management Journal, **35**, 539-570 (1992).
- [6] W.J.Ferrier, K.G.Smith, C.M.Grimm; *The Role of Competitive Action In Market Share Erosion And Industry Dethronement: A Study of Industry Leaders And Challengers*. Academy of Management Journal, **42**, 372-388 (1999).
- [7] K.G.Smith, C.M.Grimm, M.J.Gannon, M.Chen; *Organization Information Processing, Competitive Responses Industry And Performance In The U.S. Domestic Airline*. Academy of Management Journal, **34**, 60-85 (1991).
- [8] D.Miller, M.Chen, *Sources And Consequences Of Competitive Inertia: A Study Of The U.S. Airline Industry*. Administrative Science Quarterly, **39**, 1-23 (1994).
- [9] D.Miller, M.J.Chen; *The Simplicity Of Competitive Repertoires: An Empirical Analysis*. Strategic Management Journal, **17(6)**, 419-439 (1996).
- [10] M.T.Hannan, J.Freeman; *Structural inertia and Organizational Change*. American Sociological Review, **49(2)**, 149-164 (1984).
- [11] Hambrick, Cho, Chen; *The Influence of Top Management Team Heterogeneity on Firms' Competitive Moves*. Administrative Science Quarterly, **41(4)**, 659-684 (1996).
- [12] H.I.Ansoff; *The New Corporate Strategy*. New

- York, NY: Wiley, (1988).
- [13] E.Penrose; The Theory of the Growth of the Firm. Oxford: Oxford University Press, (1959).
- [14] Downes John, Jordan Elliot Goodman; Barron's Finance & Investment Handbook 4th Edition. Hauppauge, New York: Barron's Educational Series, (1986).
- [15] Z.Fluck, A.W.Lynch; Why Do Firms Merge and Then Divest? A Theory of Financial Synergy. Journal of Business, **72(3)**, 319-346 (1999).
- [16] Ping Zeng, Tiebo Song; A Study on The Relationship of The Political Connections and Organizational Performance. Chinese Journal of Management, **9(3)**, 364-370 (2012).
- [17] Ping Zeng, Tiebo Song, Hailin Lan; Environmental Uncertainty's Enterprises Strategic Responses and the Construction of Dynamic Capabilities. China Soft Science, **12**, 128-140 (2011).
- [18] M.Chen, D.Miller; Competitive attack, retaliation and performance: an expectancy-valence framework. Strategic Management Journal, **15(2)**, 85-102 (1994).
- [19] E.E.Bailey, J.R.Williams; Sources of Economic Rent In The Deregulated Airline Industry. Journal of Law and Economics, **31(April)**, 173-190 (1988).
- [20] Wu Wei-Ping, Wlt Choi; Transaction Cost, Social Capital and Firms' Synergy Creation in Chinese Business Networks: An Integrative Approach. Asia Pacific Journal of Management, 325-343 (2004).
- [21] R.M.Baron, D.A.Kenny; The Moderator-mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. Journal of Personality & Social Psychology, **51**, 1173-1182 (1986).