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A study on the determinants of nonmarket behaviors of Chinese firms

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Abstract Drawing upon the resource dependence theory, this paper examines the determinants of nonmarket behaviors in the Chinese context. Using survey data of 175 top managers in China, we test 13 firm and environment characteristics likely influencing nonmarket behaviors. Results show that a firm's economic resources, top management orientation, and uncertainty in the nonmarket environment are significantly related to Chinese firms' nonmarket behaviors.

Keywords nonmarket behavior, buffering strategy, bridging strategy

摘要 基于资源依赖理论, 考察中国企业非市场行为的影响因素, 并通过 175 位企业高层的调查数据, 验证可能影响中国企业非市场行为的企业和环境特征的 13 个假设。研究表明, 企业的经济资源、高层的管理导向和非市场环境的不确定性对中国企业的非市场行为具有显著的影响。

关键词 非市场行为, 缓冲战略, 桥梁战略

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1 Introduction

The environment of business is composed of market and non-market components (Baron, 1995). Hence a firm needs to pay attention not only to the market environment, such as clients and rival firms, and provide products and services in the need to make a profit, but also to the nonmarket environment which consists of the public, stakeholders, the government, the media, and public institutions. Undoubtedly, profit is a must to an enterprise, but it is not everything. A firm has to justify its existence in the society in the long run. Generally speaking, a firm's behaviors towards its stakeholders are called nonmarket behaviors (Baron, 1995). After World War II, with the strengthening of government intervention in the economy, the influence of government on business becomes more important than ever. As a result, a growing number of firms start engaging in political activities. As an economic transition from planning economy to market economy is underway in China, Chinese firms are influenced by government in many aspects. They therefore have to spend large amount of time handling all kinds of nonmarket affairs. Some managers frankly admitted that they spend about 30% to 50% of their time on dealing with government departments or other stakeholders (China entrepreneur survey system, 2000). In 2004, a survey conducted by a magazine named *China Entrepreneur* confirmed the above viewpoint (Fang, 2004).

What are the determinants of corporate political behaviors? Numerous western scholars have conducted many theoretical and empirical researches on the issue (Boddewyn and Brewer, 1994). However, few consistent conclusions have been reached so far. In China, though the nonmarket environment is of vital importance to Chinese firms, there has been little domestic research focusing on nonmarket strategy making. In the present article, building on relevant literature on corporate political behaviors, public affairs, and organization boundary spanning, we identify a firm's nonmarket behavior with its socio-political stakeholders. Then drawing on the resource dependence theory, we develop a series of hypotheses on some characteristics of firm and environment possibly influencing corporate nonmarket behaviors. In the end, we empirically test these hypotheses using data collected from 175 top managers.

2 Literature review

Baron (1995) firstly applied the concept of "nonmarket" to corporate-level strategies. A number of earlier researchers had studied how firms seek competitive edges by means of lobbying for more favorable public policies.

Baron (1995) argued that nonmarket strategy is a connected pattern of actions taken in the non-market environment to create value by improving its overall performance. This pattern of actions is accordingly called nonmarket behavior. More specifically, it refers to a firm's response to its social, political and legal interested parties, as embodied with corporate political behavior, government lobbying, and public affairs engagement, etc. As government is the most important influencing factor in the nonmarket environment, political activity is a main component of corporate nonmarket behavior. Contrary to the western "big society, small society" political tradition, China has a "big government" and comparatively small "society" and the vast majority of firms' nonmarket behaviors are politically-oriented. For convenience, we hereinafter use nonmarket behavior to refer to a firm's action dealing with external socio-political stakeholders.

With the strengthening of government intervention in economy, there have been great progresses in the scale, complexity, and strategic importance of corporate political behaviors. What are the preconditions of corporate political behaviors? In a recent article, Hillman, et, al (2004), after reviewing a number of related studies in top international academic journals in the past ten years, divided the preconditions of corporate political behaviors into four categories, namely firm, industrial, issue, and institutional factors. Due to limited space, we focus only on factors at the firm level. Some of the key variables at this level include firm size, degree of dependence on government, firm slack, firm age, formalization, and management orientation.

Recent research has revealed that the most significant precondition of corporate political behavior is firm size, as measured by sales revenue, total assets, market share, number of employees, etc. Generally speaking, bigger firms tend to play more active roles in political activities, implying that size is a crucial prerequisite of corporate political behaviors.

Another prominent precondition is a firm's degree of dependence on government. As a major index, sales revenue is frequently studied. For instance, a firm's sales income from government procurement or the quantity of its products sold to the Ministry of Defense, or its cost incurred by government supervision, can reflect its dependence on government to a large extent. Schuler (1999) considered the ratio of import to export in a firm as a determinant of its political behavior. In a similar vein, Hillman and Hitt (1999) pointed out firms with higher sensitivity to and dependence on government policies are prone to engage in political activities regularly.

Firm slack has long been regarded as another driving factor behind corporate political behaviors (Meznar and Nigh, 1995). There are, however, two schools of opposite opinions. One believes that only firms with sufficient resources are capable of engaging in political activities and will actively do so. The other

argues that firms with deficient resources are more likely to vigorously take part in political activities, hoping to improve their poor financial performances through political approaches. Meznar and Nigh (1995) empirically confirmed that there is a positive relation between resource and buffering strategy.

Numerous studies have revealed a certain relationship between corporate political activities and firm age. To illustrate, Hart (2001) found out that, when studying political behaviors among hi-tech enterprises, though firm age has nothing to do with the establishment of political action committee in a firm, political action committees in younger firms are usually bigger than that of in older ones. In addition, the age of a firm is closely related to a firm's transparency, reputation, experience, or credibility, etc, all influencing a firm's participation and success in political activities.

Effects of formal organizational structure on corporate political behaviors are twofold: first, by congregating professionals and other necessary resources, a formal structure helps promote corporate political activities. For example, firms with offices in Washington D.C. are more likely to support a nationwide hygiene reform than those firms without; second, a formal organizational structure can adjust the effects of the above prerequisites on political behaviors. Schuler (1999) found that organizational structure practically moderates the relation between preconditions of political environment and corporate political behaviors.

From the perspective of behavior, the political tendency of top managers (entrepreneurs in particular) in a firm is also a precondition of a firm's political behavior. Blumentritt (2003) concluded that the effects of top manager's political tendencies on a firm's political behavior may be more important than of resources. Likewise, several other studies on the political behaviors of small-sized firms also confirmed the effects of management orientation on corporate political behaviors.

Taken together, western scholars have conducted large numbers of studies on the influencing factors of nonmarket behaviors and reached many interesting conclusions. Considering the great differences in social environments between China and developed countries, which of the above factors may enhance the formation of nonmarket strategies in the Chinese context still remain unexplored.

3 Nonmarket strategy and behaviors

3.1 Non-market strategy

So far, several classification methods of nonmarket strategies have been proposed (e.g. Boddewyn and Brewer, 1994). The most widely used one among them was advanced by Meznar and Nigh in 1995, who, based on the boundary

spanning literature, categorized firms' nonmarket behaviors into buffering and bridging strategies. Specifically, buffer strategy refers an attempt to affect external environment as so to prevent external factors from intervening with internal operation. A firm adopting the buffering strategy always attempts to isolate itself from external disturbances, or try to shape the environment by donating to political action committees, lobbying, or propagandizing. By comparison, a firm adopting the bridging strategy always endeavors to meet or surpass the supervision requirements over its industry, or to quickly identify ever-changing social expectations so as to meet these expectations as soon as possible.

3.2 Organizational units for nonmarket affairs

As nonmarket strategies vary greatly from market ones, firms need to set up special units to implement these strategies. As Greening and Gray (1994) pointed out, the two factors matter most for these nonmarket affairs units are formalization and resources. The two authors divided firms into two groups, namely firms with special positions or units for nonmarket affairs and firms dealing with nonmarket affairs in accordance with given rules. The results showed that by establishing a specialized unit, a firm can effectively enhance its socio-political affairs management capabilities.

Input for nonmarket activities includes money and time. The amount of resource that a firm inputs into nonmarket affairs represents the top management's attitude toward nonmarket affairs. Through resource commitment, a firm lays emphasis on the importance of nonmarket activities. Considering resource distribution costs, it is only when benefit gained from nonmarket affairs surpasses the costs, that a firm is willing to devote its scare resources to nonmarket activities.

4 Theoretical model and research hypotheses

4.1 Theoretical basis

The resource dependence theory focuses on the interrelation between firms and environment. It presumes that, to survive and to develop, a firm needs to constantly acquire resources from the environment. In this sense, firms are constrained by the environment. Excellent firms know how to utilize and control these resources. Hence we adopt the resource dependence theory as a theoretical basis for firms' nonmarket behaviors.

Resource dependence reflects a firm's reliance on certain external actors for resources. The degree of dependence on these resources rests with type of

resource controlled by external actors and the importance of that resource to a firm's objective fulfillment. Similarly, external actors also depend on firms for certain resources, resulting in a relation of interdependence between firms and external actors. Hence in the present article, we define resource dependence as the interaction between firms and their interested parties in nonmarket environment aiming at exchanging resources with one another.

In addition to owning and controlling valuable resources, the resource dependence theory also highlights the role of management in the process of firm-environment interaction. It argues that, when dealing with external actors, resource management is equally important as resource ownership.

The resource dependence theory provides a sound theoretical foundation for studies on differences in firm nonmarket behaviors. According to it, nonmarket behaviors are at least influenced by two factors, namely a firm's economic activity and resources and its environment. In addition, the resource dependence theory argues that resource management is of key importance to a firm's interaction with external actors. As an example, Blumentrill (2003) adopted the resource dependence theory and studied how foreign subsidiaries of multinational enterprise engage in government affairs in host countries. During the transition period from planned economy to a market economy in China, a game relation exists between nonmarket entities (e.g. government) and firms (Gao, 1998). Built on the theoretical framework of resource dependence theory, we will concentrate on characteristics of firm and environment that may exert impacts on Chinese firms' nonmarket behaviors, as depicted in Fig. 1.

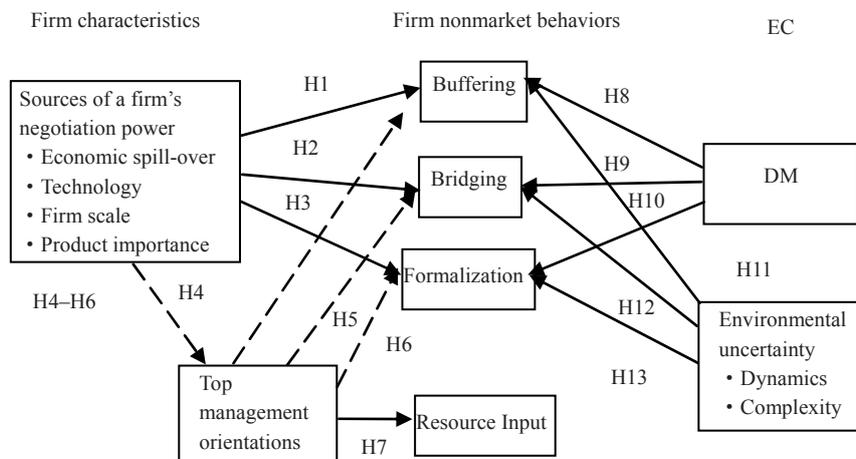


Fig. 1 Hypotheses model for factors influencing corporate nonmarket behaviors
Notes: EC= Environmental characteristics, DM= Degree of marketization.

4.2 Firm characteristics

According to resource dependence theory, two characteristics of a firm (namely sources of negotiation power and management orientation) affect its interaction with external actors (e.g. government).

4.2.1 Negotiation power

There is a direct connection between a firm's economic resources and its nonmarket strategy. Extant literature on negotiation power has shown that firms and government gain their powers from ownership of economic resources since ownership or control of resources put one in a more favorable position in a negotiation. We adopt the negotiation power framework to analyze the interaction between firms and government.

As shown in Fig. 1, a firm's negotiation power comes from a series of sources, including economic spill-over, technology, firm scale, and product importance, etc. Among them, economic spillover effects mean the positive effect a successful firm has on local economic development (such as buy raw materials from local suppliers). Technology is measured by the advanced degree of a certain technology in an industry. Firm scale is measured by the number of employees. Also, according to the resource dependence theory, the most important determinant of firm power is the significance of the resource controlled by the firm in comparison with other members in the same environment. The more important and the more un-substitutable a firm's products or services, the more favorable position the firm has in comparison with other socio-political stakeholders. Hence the degree of importance of products and services provided by a firm also decides its negotiation power.

If a firm owns or controls certain assets or capability valuable to government, the firm thus owns certain negotiation power, which in turn enables the firm with greater power to shape its business environment. With the increase of negotiation power, a firm is more likely to adopt the buffering strategy. On the contrary, if a firm owns less power-generating resources, it is more likely to adopt the bridging strategy, in the hope of giving a good impression to government.

H1: The greater its economic spillover effects/the bigger its size/the more advanced its technology/the more important its products, the more likely a firm to adopt the nonmarket bridging strategy.

H2: The smaller its economic spillover effects/the smaller its size/ the less advanced its technology/the less important its products, the more likely a firm to adopt the nonmarket bridging strategy.

To better utilize economic resources of its own and to deal with stakeholders in the nonmarket environment, a firm needs to establish a specialized organizational

unit to handle nonmarket affairs. According to the resource dependence theory, resources owned by an actor and how the actor manages its interaction with environment decide the actor's power. However, considering the opportunity cost of the resources devoted to nonmarket affairs, firms will not formally organize nonmarket activities until such behaviors can bring back greater returns. Similarly, firms with negotiation power are more likely to formalize their nonmarket activities. Hence we develop the following hypothesis:

H3: The more negotiation power a firm has in the above aspects (namely, economic spillover effect, firm size, technology, and product), the more likely it to formalize its nonmarket strategy.

The relation behind negotiation power and the amount of resource devoted to nonmarket affairs is quite counter-intuitive. Prior study has found that in comparison with firms with negotiation power, firms without such a power rely more on the political environment. Accordingly, these firms are willing to devote more of their scarce resources to the political environment, in hopes of ameliorating their less favorable position in the market. But to our best knowledge, specific relations between negotiation power and amount of resources devoted to nonmarket affairs has not yet been revealed.

4.2.2 Top management orientations

Generally speaking, managers are either enterprise-oriented or institution-oriented. The former refers to those managers who pay little attentions to non-economic factors, while the latter refers to those managers who regard their businesses as components of the larger social environment. In the present study, we divide top managers in accordance with their orientations towards nonmarket affairs. Top management teams with positive attitudes toward nonmarket affairs are more willing to make organizational commitments to nonmarket affairs.

Therefore, top management orientations act as a moderator between the relation of a firm's negotiation-power-generating resources and its nonmarket affairs. That is to say, although the ownership of negotiation-power-producing resource makes it possible for a firm to bargain with other stakeholders in the nonmarket environment, it is the decision made by top manager in the firm that determines the actual effects of this resource. According to the resource dependence theory, power comes from control over certain resources and participants themselves. In this sense, differences in managers significantly moderate the influence that comes from negotiation-power-generating resources. If the top management team holds positive attitude towards nonmarket activities, a firm is more likely to adopt the nonmarket strategy and formalize its nonmarket activities. Since top management orientation significantly affects a firm's attitude towards nonmarket affairs, we thus develop the following hypotheses:

H4: Attitude of top management toward nonmarket affairs moderates the relation between a firm's negotiation-power-generating resources and its buffering strategy. Concretely, only when its top management holds a positive attitude towards nonmarket affairs, will a firm devote its negotiation-power-generating resources to implement its buffering strategy.

H5: Attitude of top management toward nonmarket affairs moderates the relation between a firm's negotiation-power-generating resources and its bridging strategy. Concretely, only when its top management holds a positive attitude towards nonmarket affairs, will a firm devote its negotiation-power-generating resources to implement its bridging strategy.

H6: Attitude of top management toward nonmarket affairs moderates the relation between a firm's negotiation-power-generating resources and formalization of nonmarket affairs. Concretely, only when its top management holds a positive attitude towards nonmarket affairs, will a firm formalize its nonmarket activities.

Top management's attitude towards nonmarket affairs also affects the amount of resources devoted to nonmarket affairs. When top managers of a firm believe that nonmarket affairs will significantly affect the firm's competitive performance, they are willing to devote more resources (money and time) to nonmarket activities. Hence

H7: There is a positive relation between top management's attitude towards nonmarket activities and amount of resources devoted.

4.3 Environmental characteristics

When exploring the relation between firms and external environment, we focus on two components of environmental characteristics in accordance with the negotiation power framework, namely degree of marketization and environmental uncertainty. The former reflects the degree of economic freedom in a country or a region; the latter the dynamics and complexity of the socio-political environment faced by the firm.

4.3.1 Degree of marketization

With the progress of economic transition, intervention from government in business has been decreasing gradually. However, the degree of economic freedom varies greatly in different provinces in China. In some areas, local government can still exert great influence over economic activities. As a result, firms in these areas may be more likely to be motivated to adopt nonmarket strategies. Specifically, a firm will adopt the buffering strategy to reduce the impact from government intervention or adopt the bridging strategy to build

better relations with local government. We thus propose two hypotheses as below:

H8: The lower the degree of marketization in a region, the more likely local firms are to adopt nonmarket buffering strategies.

H9: The lower the degree of marketization, the more likely local firms are to adopt nonmarket bridging strategies.

In addition, the degree of economic freedom in a region also affects the formalization of nonmarket activities in local firms. By comparison, firms in regions with a lower degree of marketization are more likely to formalize their nonmarket activities, due to the greater intervention from local governments.

H10: The lower the degree of marketization, the more likely local firms are to formalize their nonmarket activities.

4.3.2 Environmental uncertainty

To a large extent, firms are in constant interaction with the environment. For one thing, a firm has to remain open to the external environment for resource input and product output; for another thing, a firm has to be watchful against possible leakage of key aspects of the firms technical knowledge. Hence to reduce the environmental uncertainty is of key importance to a firm.

In a similar vein, uncertainties in the socio-political environment make firms highlight the buffering function of nonmarket activities. The reasons are twofold: first, uncertainty in the nonmarket environment threatens a firm's application of its core technology, thus the firm seeks protection of its core technology through the buffering strategy; second, by adopting the buffering strategy, a firm can more or less predict, control, or adapt to new changes in the nonmarket environment more efficiently. Thus we contend that when uncertainty in the nonmarket environment increases, the buffering function of the nonmarket strategy will be stressed accordingly. Thus it seems reasonable to presume:

H11: Uncertainty in nonmarket environment is positively related to a firm's buffering strategy.

On the other hand, environmental uncertainty also gives rise to the increase of all kinds of boundary-spanning activities. When the environment becomes more dynamic and uncertain, firms will adopt different means to try to reduce the ever-increasing uncertainty. Thus increasing environmental uncertainty will prompt firms to strengthen their environment adaptability. By doing so, firms wish to keep on meeting constantly changing social expectations.

H12: Uncertainty in nonmarket environment is positively related to a firm's bridging strategy.

In addition, environmental uncertainty also impels firms to collect more

information and to formalize the activities of sociopolitical information collection and transmission. By doing so, firms hope to be able to predict more precisely the forthcoming environment changes.

H13: Uncertainty in the nonmarket environment is positively related to the formalization of nonmarket affairs.

5 Data collection and research methods

5.1 Data source

To test the above framework and hypotheses, we collected data from two sources: first, questionnaires delivered to top managers; second, secondary data of degree of marketization in each municipality, province, and autonomous region from publications.

Most of the entries in our questionnaire were from a frequently tested scale developed by western scholars. New questions were carefully discussed and proved by a group of experts, including two senior professors specialized in the same field, four Ph.Ds, and five senior managers (two from Jiangxi province, two from Wuhan city, and one from Guangdong province). Trail tests were conducted among the EMBA students of Zhongnan University of Economics & Law. The modified questionnaire was further discussed with and proved by seven senior managers.

Secondary data was used to measure the degrees of marketization in each municipality, province and autonomous region. We adopted Fan and Wang's(2004) index of marketization, consisting of five aspects: (1) relation between government and firms; (2) development of non-state-owned enterprises; (3) development of product market; (4) development of element market; (5) development of intermediary organizations and law & institutional environment. Composed of 23 basic sub-indexes, each of the above five indexes reflects a specific aspect of marketization.

As a firm's nonmarket behavior mainly involves its top managers, say president, vice president, department directors, etc, we only chose EMBA students of Huazhong University of Science and Technology and a few part-time MBAs who are currently holding or held senior managerial positions in their companies as our samples. Questionnaires were handed out and retrieved during class intervals. In addition, by field studies or Emails, we surveyed top managers in a number of cooperative firms. Our survey lasted from November to December in 2005. A total of 300 questionnaires were delivered, of which 209 copies were returned, resulting in a response rate of 69.7%. Questionnaires with more than 10 missing answers or identical answers were eliminated. The final

sample was comprised of 175 copies of questionnaires, with a valid response rate of 58%.

5.2 Data analysis

SPSS 12.0 software package was used to test the data. Main effects of the four dependent variables in hypotheses 1, 2, 3, 7, 8, 9, 10, and 11 were tested. For the testing of Hypotheses 4, 5, and 6, we adopted the program developed by Blumentritt, which includes three regression equations. More specifically, Equation 1 includes the regression of moderator (top managers' management orientations) on each source of negotiation power; Equation 2 includes the regressions of each dependent variable (buffering/bridging/formalization) on independent variables; Equation 3 includes the simultaneous regressions of dependent variables on independent variables and moderator. As for the moderating effects, independent variables significantly affect moderator in Equation 1; mediator significantly affects dependent variables in Equation 2; in Equation 3, moderator significantly affects dependent variables while impacts from independent variables become insignificant (full moderating) or less significant (partially moderating).

6 Results

The means, standard deviations, and Pearson correlation coefficients of each factor are listed in Table 1.

6.1 Independence of buffer and bridge strategies

Though theoretically speaking, the division of buffering strategy and bridging strategy is quite feasible. We still needed to test the practical effects of such a division. Factor analysis method was adopted. We first used principal component analysis to extract factors and varimax orthogonal rotation method to rotate factors. Factors with characteristic value > 1 were extracted, resulting in two common factors. Factor 1 is made up of buffering activities, while Factor 2 composed of bridging activities (as shown in Table 2). The results were in consistent with our conclusion of theoretical analysis.

Table 1 Means, standard deviations, and Pearson correlation coefficients of each variable

Variables	N	M	SD	1	2	3	4	5	6	7	8	9	10
<i>ES</i>	175	4.3	1.31										
<i>T</i>	175	4.2	1.3	0.314**									
<i>S</i>	175	3.2	1.6	0.421**	0.359**								
<i>I</i>	175	4.7	1.7	0.147	0.007	-0.01**							
<i>TMO</i>	175	4.7	1.4	0.319**	0.277**	0.023	-0.125						
<i>BUS</i>	175	4.4	1.2	0.393**	0.355**	0.187*	0.032	0.377**					
<i>BRS</i>	175	4.3	0.9	0.330**	0.284**	0.190*	0.136	0.410**	0.564**				
<i>F</i>	175	4.0	1.3	0.309**	0.382**	0.188*	-0.020	0.513**	0.493**	0.411**			
<i>R</i>	175	4.0	1.6	0.291**	0.284**	0.174*	0.014	0.625**	0.277**	0.319**	0.558**		
<i>DM</i>	16	6.4	1.4	-0.193*	-0.067	-0.092	-0.018	0.037	-0.126	-0.086	0.057	-0.111	
<i>E</i>	175	5.0	1.1	0.242**	0.191*	0.120	-0.017	0.313**	0.322**	0.290**	0.275**	0.346**	-0.058

Note: (1) * $p \leq 0.05$; ** $p \leq 0.01$.

(2) Abbreviations:

ES = Economic spillover

S = Firm scale

TMO = Top management orientation

BRS = Bridging strategy

R = Resources input

E = Environment uncertainty

T = Technology

I = Product importance

BUS = Buffering strategy

F = Formalization

DM = Degree of marketization

Table 2 Factor analysis results of nonmarket strategies

Entries	Factor 1	Factor 2
Buffering3	0.778	0.142
Buffering5	0.747	0.046
Buffering6	0.734	0.208
Buffering2	0.731	0.159
Buffering7	0.727	0.242
Buffering1	0.639	0.308
Buffering4	0.518	0.320
Bridging2	0.309	0.793
Bridging4	0.207	0.751
Bridging3	0.264	0.721
Bridging5	-0.009	0.696
Bridging1	0.460	0.511

6.2 Hypotheses testing

Table 3 shows the results of statistical analysis results of firm characteristics. Among them, H1 and H3 are partially supported. Economic spillover and technology are positively related to buffering and formalization, while firm scale and product importance are not. H2 is not supported, that is, there is a positive, rather than negative, relation between economic spillover and technology and bridging strategy, while the relation between firm scale and product importance and bridging strategy is not significant. H7 is strongly supported, that is, top management orientation is significantly and positively related to resources devoted to nonmarket activities. The result indicates that top manager's attitude towards nonmarket affairs significantly affects a firm's nonmarket activities.

Table 4 shows the results of statistical analysis results of environment characteristics. Among them, H8, H9, H10 are not supported, while H11, H12, and H13 are supported.

H4, H5, and H6 explored the moderating effects of top management orientation on the relation between a firm's negotiation-power-generating resources and its nonmarket activities. Table 5 demonstrates the moderating effects when all independent variables are entered into the regression equation. Column 1 lists the regression of mediator (top management orientation) on negotiation-power-generating resources (Equation 1), indicating a significant relation between economic spillover and technology and top management orientation.

Equation 2 and 3 indicates the effects of moderator on independent variables. Economic spillover and technology are significantly related to buffering strategy in Equation 2. When top management orientation is entered into the equation, however, the effects of economic spillover and technology on buffering decrease

Table 3 Statistical analysis of firm characteristics

Independent variables	hypothesis	Buffering	Hypothesis	Bridging	Hypothesis	Formalization	Hypothesis	Resources
Firm characteristics								
<i>EC</i>	1a (+)	0.306***	2b (-)	0.199**	3c (+)	0.224*		
<i>T</i>	1b (+)	0.273**	2b (-)	0.139*	3b (+)	0.318***		
<i>S</i>	1c (+)	-0.048	2c (-)	0.007	3c (+)	-0.019		
<i>I</i>	1d (+)	0.098	2d (-)	0.083	3d (+)	0.027		
Managerial factor								
<i>TMO</i>							7 (+)	0.693***
<i>F</i> value		17.973		11.197		15.057		85.438
<i>R</i> ²		0.214		0.145		0.186		0.391
Adjusted <i>R</i> ²		0.202		0.132		0.173		0.387

Notes: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

Table 4 Statistical analysis of environment characteristics

Independent variables	hypothesis	Buffering	Hypothesis	Bridging	Hypothesis	Formalization	Hypothesis	Resources
Environmental characteristics								
<i>DM</i>	8 (-)	-0.113	9 (+)	-0.058	10 (-)	0.056		
Environmental uncertainty	11 (+)	0.369***	12 (+)	0.251***	13 (+)	0.343***		
<i>F</i> value		15.386		12.217		10.87		
<i>R</i> ²		0.104		0.084		0.076		
Adjusted <i>R</i> ²		0.097		0.077		0.069		

Notes: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

both in equation coefficients and in significance degrees. Similarly, economic spillover and technology are significant related to bridging strategy in Equation 2. When top management orientation is entered into the equation, however, the importance of economic spillover decreases, while the technology variable becomes insignificant. The effects of economic spillover and technology on formalization are significant in Equation 2. When top management orientation is entered into the equation, however, the economic spillover effects become insignificant. These results partially support H4, H5, and H6. It needs to be noted that the variable of top management orientation has a strongly positive relation with each variable of nonmarket activities.

Table 5 Moderating effects

Equation	1	2	3	2	3	2	3
	<i>TMO</i>	<i>BUS</i>	<i>BUS</i>	<i>BRS</i>	<i>BRS</i>	<i>F</i>	<i>F</i>
<i>ES</i>	0.364***	0.306***	0.246**	0.199**	0.165**	0.224*	0.102
<i>T</i>	0.258**	0.237**	0.194**	0.139*	0.138	0.318***	0.261***
<i>S</i>	-0.181	-0.048	0.000	0.007	0.110	-0.019	0.097
<i>I</i>	-0.071	0.098	0.112	0.083	0.098	0.027	0.065
<i>TMO</i>			0.211**		0.227***		0.424***
<i>F</i> value	8.834	17.973	15.612	11.197	17.83	15.057	31.901
<i>R</i> ²	0.168	0.214	0.263	0.145	0.213	0.186	0.326
Adjusted <i>R</i> ²	0.149	0.202	0.246	0.132	0.201	0.173	0.316

Notes: (1) There are only partial moderating effects in H4, H5, and H6.

(2) * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

7 Conclusion and discussion

Building on resource dependence theory, this paper probes into the characteristics of firm and environment possibly influencing firms' nonmarket behaviors. Empirical analysis shows that a firm's negotiation-power-generating resources have significant impacts on its nonmarket activities, moderated by top management orientation. In addition, uncertainty in the nonmarket environment also significantly affects a firm's nonmarket activities. One contribution of the present article to extant literature is that, based on the framework of negotiation power, we found that top management orientation moderates the relation between a firm's negotiation-power-generating resources and its nonmarket activities.

Several of our findings are worth noting. First, further studies on the effects of top management orientation on a firm's participation in nonmarket affairs are needed. Our results show that top management team's attitude towards nonmarket affairs moderates the relation between a firm's economic resources

and its nonmarket activities. As above, when using the framework of power to analyze the political activities of foreign subsidiaries of multinational enterprises, Blumentritt (2003) found that (1) absolute power is not the most important factor for corporate political behavior; (2) management orientation is more important than resources. As a result, Blumentritt concluded that the negotiation power model is useless. In contrast, we found that the negotiation power framework is helpful in analyzing the game relation between firms and their nonmarket stakeholders (e.g. government). These inconsistent conclusions may result from the uniqueness of China's market. By comparison, most Blumentritt's sample companies were from developed countries with standardized market economies and little government intervention in economy. In China, however, things are quite different. Development of the economy is the top priority of the local government at all levels. Under such circumstances, the more a firm contributes to local economy, the more attention it gets from nonmarket stakeholders, such as local government, media, etc. Local government tends to see such a firm as a good example and frequently take care of its operations, giving rise to the firm's nonmarket activities. Thus the economic resources owned by a firm do have impacts on its nonmarket activities in the Chinese context.

Managerial factors have long been neglected in the analysis framework of power, with an important exception of Blumentritt, who introduce for the first time the managerial factor into the framework. However, Blumentritt discarded the framework completely as useless. In contrast, we argued that it is feasible to include top management orientation into the analysis framework of negotiation power. Our results show that top management orientation moderates the relationship between a firm's negotiation-power-generating resources and its nonmarket activities.

Second, the empirical test results of H2a and H2b were inconsistent with our original presumptions. One possible explanation may be that firms with more economic resources (namely greater economic spillover effects and more advanced technologies) tend to be big in size, thus drawing more public attention, which in turn prompts these firms to engage in public affairs activities (bridging strategy). By comparison, small-sized firms are less noticed and thus take part in public affairs activities less frequently. This result is consistent with our daily observation that big-sized firms pay more attention to their social responsibilities while small-sized firms do not. Yet another possible explanation is that market competitions may give rise to a firm's nonmarket bridging activities. After entering into the WTO, multinational enterprises entered the Chinese market in large numbers, whose mature corporate cultures and advanced public participation systems provide them with a considerable competitive edge. Consequently, domestic big firms now feel obliged to pay more attention to their social responsibilities. The interrelation between firms' market and nonmarket

behaviors deserve more academic attentions in the future.

Third, both H11 and H12 were supported, indicating that government intervention and supervision gives rise to nonmarket buffering activities. Firms are prone to adopt lobbying or other measures in hopes of reducing or preventing government interventions. Also, the booming of non-government organizations such as charity, environment-protection, or education organizations and changes in public values make firms feel obliged to participate in more public affairs activities.

Fourth, what needs to be recognized is that the dichotomy of nonmarket behaviors into buffering and bridging may need deeper and more detailed analysis in the future. Although it is theoretically plausible and supported by our empirical study, such a division still seems too rough, thus deserving further refinement. Future study may proceed to categorize different kinds of nonmarket affairs (such as political affairs and social affairs), or sort out different stakeholders. Our results showed that the dichotomy of buffering and bridging activities is quite helpful in analyzing different kinds of nonmarket behaviors. It deepened our understandings of which kind of nonmarket activities firms highlight under certain circumstance. As above, a firm needs to justify its existence in the long run. How to realize an optimal match among firm characteristics, external environment, and its nonmarket activities is vital to a firm's long-term existence.

Fifth, much to our dismay, the presumed relation between degree of marketization and firms' nonmarket strategies (namely buffering and bridging strategy) was not confirmed in this study. A possible explanation is that the regional degree of economic freedom was measured according to firm locations, but many of our sample firms run business in various areas, rather than limited to local regions. As a result, a firm's location may not be an optimal index of the firm's degree of operation freedom. A new index shall be designed to further test H11 and H12.

The limitations of this research mainly resulted from survey design. First, due to sample limitations, we did not distinguish different industries. However, nonmarket behaviors in different industries may vary greatly due to different levels and styles of government supervision. Therefore, further study needs to be given to the comprehensive examination of industrial differences. Second, our participants were mainly EMBA students. In addition, the sample firms were geographically concentrated in certain regions, resulting in possible errors of overgeneralization.

In conclusion, this paper empirically explores the characteristics of firm and environment possibly influencing firms' nonmarket behaviors. The results show that a firm's economic resources, top management orientation, and environmental uncertainty all affect the firm's nonmarket behaviors, which

reasonably explains why Chinese firms devote large amount of resources to deal with government and other stakeholders. With the progress of China's marketization reform and its mergence into global economy, Chinese firms are going to face a more dynamic and complex environment. It is thus predicted that there will be an increase in firm nonmarket behaviors in China.

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