

MANAGERIAL TIES AND FIRM PERFORMANCE IN A TRANSITION ECONOMY: THE NATURE OF A MICRO-MACRO LINK

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Using survey data from China, we demonstrate that managers' micro interpersonal ties with top executives at other firms and with government officials help improve macro organizational performance. This micro-macro link differs among firms with different (1) ownership types, (2) business sectors, (3) sizes, and (4) industry growth rates. In addition, managerial ties were found to be necessary but insufficient for good performance; a number of traditional strategy variables also drive performance. Theoretically, the findings point to the importance of the social context in which managerial ties are embedded. Empirically, this study provides the first set of quantitative data demonstrating both the extent and limits to which managerial ties are beneficial in a transition economy.

The strategic choices that managers make inherently reflect their backgrounds and experience (Child, 1972; Hambrick & Mason, 1984). As a result, managers' social ties, contacts, and networks are believed to affect firms' strategic choices and performance. This relationship thus leads to a link between managerial ties, a micro-level construct, and firm performance, a macro-level phenomenon. Although most scholars agree that the social capital embodied in managerial ties and networks matters (Burt, 1997; Granovetter, 1985), researchers "must tackle the harder and more interesting issues of how they [ties and networks] matter, under what circumstances, to what extent, and in what ways" (Powell, 1996: 297).

Taking on this challenge, we focused on managerial ties, which in this article are defined as "executives' boundary-spanning activities and their associated interactions with external entities" (Geletkanycz & Hambrick, 1997: 654), and investigated the relationship between these ties and firm

performance. The literature suggests that the greater the environmental uncertainty, the more likely it is that firms will rely on managerial ties when entering exchange relationships (Pfeffer & Salancik, 1978; Powell, 1990). The social capital embedded in managerial ties may be more important in imperfect competition characterized by weak institutional support and distorted information. Armed with useful ties and contacts, a manager "becomes an entrepreneur in the literal sense of the word—a person who adds value by brokering the connection between others" (Burt, 1997: 342). Given that most existing research has taken place in relatively stable, Western economies, it follows that managerial ties in transition economies such as Eastern Europe, the former Soviet republics, and China may embody more useful social capital that can compensate for these countries' lack of market-supporting institutions such as transparent laws and regulations (Peng & Heath, 1996). These settings, therefore, offer a fascinating context in which to explore the micro-macro link (Luo & Chen, 1997; Peng, 1997, 2000).

Specifically, using survey data from China's transition economy, we demonstrate that managers' ties with managers at other firms and with government officials help improve firm performance. Moreover, we propose and test a contingency perspective to specify the nature of such a micro-macro link, suggesting that the impact of managerial ties on firm performance differs among firms with different (1) ownership types, (2) business sectors, (3) sizes, and (4) industry growth rates. Finally, we introduce a number of control variables documenting that man-

This research was supported in part by the Hawaii and Ohio State CIBERs, the Chinese University of Hong Kong, and the Hong Kong Research Grants Council. We thank Kevin Au, Jay Barney, Paul Beamish, Trevor Buck, Ming-Jer Chen, Larry Farh, Don Hambrick, Kathy Harrigan, Anne Ilinitich, C. M. Lau, K. H. Lee, Orlan Lee, Yuan Lu, Shige Makino, Agnes Peng, Oded Shenkar, John Slocum, Justin Tan, Mary Teagarden, Anne Tsui, Denis Wang, Steve White, Mike Wright, and three anonymous reviewers for their helpful comments and discussions and Forrest Chan, Gordon Law, and Heli Wang for research assistance.

agerial ties alone are necessary but insufficient for good performance. A number of traditional strategy variables, such as quality and advertising, are also found to drive performance. Overall, these efforts extend the work of Luo and Chen (1997), Peng (1997, 2000), and Peng and Heath (1996) by providing the first set of quantitative data demonstrating both the extent to which managerial ties are beneficial in economic transitions and the limits of those benefits.

MANAGERIAL TIES AND FIRM PERFORMANCE IN A TRANSITION ECONOMY

According to social network theory, managers with better interpersonal connections tend to earn more income, get more frequent promotions, and have better careers—in short, there is a clear micro-macro link between their ties and their rewards (Burt, 1997; Granovetter, 1985). However, the link between managerial ties and firm performance has yet to be firmly established empirically. Scholars interested in such a micro-macro link have paid a great deal of attention to the effects of interlocking directorates in Western corporations. Despite decades of research, evidence on a link between board interlocks and firm performance has remained largely inconclusive (Mizruchi, 1996). Going beyond the interlocks-performance link, recent work, such as that of Geletkanycz and Hambrick (1997) has focused on the implications of managerial ties for strategic choice and performance. However, these studies still have not unambiguously established a direct micro-macro link. As Mizruchi and Galaskiewicz commented, “Perhaps alternative types of inter-organizational relations . . . have a more consistent impact on [firm] performance, but this has yet to be demonstrated empirically” (1994: 241).

Taking Mizruchi and Galaskiewicz’s (1994) comment above as a point of departure, we suggest that transition economies such as China, Eastern Europe, and the former Soviet republics may represent a promising new context in which to explore the micro-macro link (Peng, 2000). Despite the wide-ranging differences, one common feature permeates these countries, namely, the existence of “institutional voids” because of a lack of market-supporting institutions (Khanna & Palepu, 1997). Thus, managers and firms often have to perform basic functions by themselves; these functions might include obtaining market information, interpreting regulations, and enforcing contracts (Khanna & Palepu, 1997). In an environment where formal institutional constraints such as laws and regulations are weak, informal institutional con-

straints, such as those embodied in the interpersonal ties cultivated by managers (for instance, *blat* in Russia and *guanxi* in China), may play a more important role in facilitating economic exchanges and hence assert a more significant impact on firm performance (Peng & Heath, 1996).

North (1990) noted that economic growth typically occurs in well-regulated economies. Given China’s strong economic growth (averaging 9 percent annually since 1979) and its underdeveloped institutional structures, researchers are puzzled: “How can China be achieving rapid rates of growth while retaining [such] an institutional order?” (Boisot & Child, 1996: 607). Although there are many answers to this intriguing puzzle, a partial answer seems to lie in the interpersonal ties across organizational boundaries cultivated by managers, which serve as substitutes for formal institutional support and as access to resources in a turbulent environment (Peng & Heath, 1996).

Most Chinese cultivate intricate and pervasive personal ties, called *guanxi* (pronounced “kuan-shi”), which govern their attitudes toward social and business relationships (Tsui & Farth, 1997). Although managers all over the world devote a considerable amount of time and energy to cultivating interpersonal ties (Mintzberg, 1973), Chinese managers perhaps “rely more heavily on the cultivation of personal relationships to cope with the exigencies of their situation” (Child, 1994: 150). As a result, China may represent an ideal research laboratory in which to explore the micro-macro link (Shenkar & von Glinow, 1994: 56).¹

Conceptually, Nee (1992) and Walder (1995) argued that a network strategy linking newly founded firms and local officials may lead to better firm performance. Peng and Heath (1996) identified a growth strategy that is neither market nor hierarchy. What is at work seems to be a process of boundary blurring in which interpersonal ties cultivated among managers and government officials are translated into interfirm ties intended to confer better firm performance, leading to “network capitalism,” as suggested by Boisot and Child (1996). These conceptual insights have inspired a number of empirical studies (Child, 1994; Lu, 1996; Peng, 1997; Tsang, 1998; Xin & Pearce, 1996; Yeung & Tung, 1996). Although rich in details, these studies have tended to be qualitative and to employ small samples. In a rare quantitative study, Luo and Chen (1997: 14) reported that managerial ties have “a

¹ A more extensive review of the literature on Chinese organizations can be found in Peng, Lu, Shenkar, and Wang (2001).

systematic and positive effect" on firm performance. However, this study, as its authors conceded (Luo & Chen, 1997: 15), did not establish a direct micro-macro link and instead focused on an indirect link moderated through marketing and credit policy practices. Moreover, all the sampled firms were taken from one province, calling the generalizability of the findings into question.

Overall, the existing findings seemed to resonate well with the conventional wisdom on the importance of personal connections in China, which is summed up by the statement "Who you know is more important than what you know" (Yeung & Tung, 1996: 54). However, these studies have usually fallen short of specifying what specific types of ties are more important. The question thus remains, *exactly* how useful are managerial ties?

SPECIFYING THE NATURE OF A MICRO-MACRO LINK

Two Types of Managerial Ties

Building managerial ties centers on networking, which can be defined as both an individual's attempt to mobilize personal contacts in order to profit from entrepreneurial opportunities (Granovetter, 1985) and a firm's efforts to cooperate with others in order to obtain and sustain a competitive advantage (Powell, 1990). Top managers cultivate two specific types of ties in China (Luo & Chen, 1997; Peng, 1997). The first type are ties with executives at other firms, such as suppliers, buyers, and competitors (Dubini & Aldrich, 1991). Good relationships with suppliers may help a firm acquire quality materials, good services, and timely delivery. Similar ties with buyers may spur customer loyalty, sales volume, and reliable payment. Moreover, good relationships with executives at competitor firms may facilitate possible interfirm collaboration and implicit collusion, while minimizing uncertainties. Previous research has indicated that the more uncertain the environment, the more likely informal ties with managers at other firms will be mobilized (Pfeffer & Salancik, 1978). These ties can be regarded as an opportunity set for interfirm relationships or as a lubricant to reduce transaction costs (Williamson, 1985). Thus:

Hypothesis 1. Personal ties possessed by a firm's top managers with top managers at other firms are positively associated with firm performance.

In addition to personal ties with top managers at other firms, a unique type of ties that executives in transition economies such as China have to culti-

vate are those with government officials (Luo & Chen, 1997). Despite two decades of reforms, officials at various levels of the government still have considerable power to approve projects and allocate resources (Walder, 1995). As a result, arbitrary intervention from the government remains a constant danger to many firms (Nee, 1992; Peng, 1997). In such an environment, it is not surprising that Chinese executives reported that among eight environmental factors that have an impact on firm performance, the state regulatory regime is the most influential, most complex, and least predictable (Tan & Litschert, 1994). Given the need to co-opt sources of environmental uncertainty (Pfeffer & Salancik, 1978), these managers naturally maintain a "disproportionately greater contact" with government officials (Child, 1994: 154). It follows, then, that top managers with better ties with officials may be able to navigate the uncertain waters better and hence lead their firms to higher performance. Therefore:

Hypothesis 2. Personal ties with government officials possessed by a firm's top managers are positively associated with firm performance.

According to the resource-based perspective (Barney, 1991), the social capital embedded in managerial ties can be regarded as a valuable, unique, and intangible resource that is difficult to replicate, thus giving firms possessing such ties a significant advantage (Tsang, 1998). It is unclear, however, which set of managerial ties—those with other managers (Hypothesis 1) or those with officials (Hypothesis 2)—is more important. This question, therefore, is an empirical one that has to be answered by analysis of data.

A Contingency Perspective

Although it is easy to regard Chinese managers as eager participants in the game of building managerial ties, the diversity of Chinese organizations suggests that not all of them are interested in all types of ties and that not all ties are equally beneficial to all firms. As a result, theoretically, it is important to recognize the heterogeneity among firms, which suggests the usefulness of taking a contingency perspective in trying to capture the nature of the focal micro-macro link (Dubini & Aldrich, 1991: 305). Although firms' strategies, structures, and environments can vary considerably, in this exploratory study, we focused on the most salient and transparent aspects of organizational traits as contingency factors. Specifically, we suggest that firms vary according to their (1) ownership, (2) business sector

(that is, manufacturing versus service), (3) size, and (4) industry growth, and that the strength of the micro-macro link differs along these dimensions.

Ownership. A hallmark of transition economies is the coexistence of non-state-owned and state-owned enterprises (SOEs). Most scholarly research (Child, 1994; Lu, 1996) and official statistics (Chinese Academy of Social Sciences [CASS], 1997; China International Business Investigation Company [CIBIC], 1996; State Statistical Bureau [SSB], 1995, 1996) differentiate firms in China according to their ownership types. Although SOEs have lost a lot of privileges during the transition, they continue to have relatively easier access to government officials. Managers from these more established firms may also have had a longer time to develop ties among themselves. Moreover, SOEs may still be state-controlled in that their top managers are likely to be appointed by the state, their budgets soft, and their incentive structures not directly linked with performance. As a result, SOE managers may be less motivated to seek strong performance and, thus, may make less effort to cultivate good ties than the managers of private firms (Jensen & Meekling, 1976). In contrast, non-SOEs, such as private firms and foreign-invested firms, initially suffer from a lack of legitimacy as new organizations (Aldrich & Fiol, 1994). Top executives at these firms may have a stronger urge to improve managerial ties to compensate for their liability of newness. Such an urge may be especially powerful in a transition economy characterized by a lack of formal institutional support for non-SOEs (Peng, 1997; Xin & Pearce, 1996). Moreover, these managers face hard budgets, which discipline them to search for better performance, and their incentive structures tend to align with performance better. Thus, non-SOE managers may be strongly motivated to search for ways to improve performance by socially investing in the two types of ties. Overall, we may regard non-SOE managers' entrepreneurial drive for developing interpersonal ties as a valuable, unique, and intangible resource that SOE managers cannot easily imitate (Barney, 1991). Therefore:

Hypothesis 3a. The impact on firm performance of managerial ties with top managers at other firms is stronger for firms that are not state owned than it is for state-owned enterprises.

Hypothesis 3b. The impact on firm performance of managerial ties with government officials is stronger for firms that are not state owned than it is for state-owned enterprises.

Business sector. Different business sectors may result in different impacts of managerial ties on firm performance. Specifically, manufacturing companies may need to pay more attention to developing strengths in technological and organizational capabilities such as quality, pricing, and advertising (Barney, 1991; Scherer, 1980), independent of their managerial ties. In comparison, service businesses in general are more relationship-intensive and rely more on external resources. They have to constantly search for clients and cultivate relations with them. In addition to these natural sectoral differences, there are differences in the legal frameworks for these sectors; in transition economies, the framework surrounding services is even less developed than that surrounding manufacturing. In China, many service industries, such as banking, insurance, and transportation, are not yet fully open for market competition. As a result, top managers at firms in service sectors (including SOEs) may have to devote more resources to constructing and sustaining ties with executives at other firms and with government officials in order to "co-opt" sources of environmental uncertainty (Child, 1994). Note that we are not suggesting that service firms do not have to pay attention to issues such as quality, delivery, and pricing. What we are proposing is that, relatively,

Hypothesis 4a. The impact on firm performance of managerial ties with top managers at other firms is stronger for service firms than for manufacturing firms.

Hypothesis 4b. The impact on firm performance of managerial ties with government officials is stronger for service firms than for manufacturing firms.

Firm size. Firm size has long been found to be an important factor affecting firm survival and performance (Porter, 1980). As Peng (1997), Xin and Pearce (1996), and Yeung and Tung (1996) found in China, smaller firms typically need to rapidly establish ties with other organizations in order to gain legitimacy, thus combating their liability of age (Aldrich & Fiol, 1994). Smaller firms may also be more flexible and capable in constructing and improving ties than their larger, more bureaucratic counterparts. In contrast, larger firms tend to be more established, with more stable business partners and government connections and, as a result, they may not be as enthusiastic about cultivating managerial ties as their smaller competitors. Even if individual managers at larger firms become interested in developing certain ties, the impact of such ties on overall firm performance may be less pronounced

because of these firms' sheer size (Dubini & Aldrich, 1991: 309). Thus,

Hypothesis 5a. The impact on firm performance of managerial ties with top managers at other firms is stronger for smaller firms than for larger firms.

Hypothesis 5b. The impact on firm performance of managerial ties with government officials is stronger for smaller firms than for larger firms.

Industry growth. The impact of an industry's growth on firm performance has been well established in the strategy literature (Porter, 1980). Although the Chinese economy has experienced impressive growth overall, not all industries, and certainly not all firms, have been growing. Some rise while others fall. In general, a fast-growing industry may offer most of its firms an opportunity to expand. As a result, there may be relatively less need for managers to cultivate relationships. Conversely, a slow-growing industry is likely to be more competitive and saturated (Scherer, 1980). Therefore, firms in low-growth industries may have a stronger incentive to mobilize their executives' social ties in order to make a last-ditch effort to stay afloat and strengthen performance. Thus,

Hypothesis 6a. The impact on firm performance of managerial ties with top managers at other firms is stronger for firms in low-growth industries than for firms in high-growth industries.

Hypothesis 6b. The impact on firm performance of managerial ties with government officials is stronger for firms in low-growth industries than for firms in high-growth industries.

In sum, the proposed contingency perspective provides a set of specific predictions connecting managerial ties and firm performance in economic transitions. Although this new perspective does not exhaust all possible contingency factors affecting performance, it does specify the proposed micro-macro link with much greater precision than the broad-brushed statements typically found in the literature (for instance, "building managerial ties is always helpful").

Necessary, but not sufficient? In light of China's increasingly market-driven economy, managerial ties may be "a necessary, but not sufficient, condition for business success" (Tsang, 1998: 71). After all, a firm has to add value in the marketplace. As a result, firms' resources and capabilities in market competition, such as quality, pricing, and advertising, may also be important determinants of perfor-

mance, independent of managerial ties (Barney, 1991; Porter, 1980). As a result, in our empirical tests, we introduced a set of control variables that capture the extent to which these traditional strategy variables may drive performance.

METHODS

Design, Sample, and Reliability Tests

We initiated this research with extensive case studies of three Chinese firms based on in-depth interviews with 15 managers conducted over a seven-year period (1989–96) and reported in Peng (1997). This longitudinal field work helped us recognize the important link between managerial ties and firm performance. Attempting to quantitatively validate our field findings, we undertook a mail survey in 1996–97. A survey questionnaire was first subjected to back-translation to ensure validity and then pretested for face and construct validity with 27 managers from 20 firms in a major industrial center in Jiangsu province. The interview results supported our attempt to conceptually separate the construct of managerial ties into two parts. For example, one manager told us:

If managers at other firms could be regarded as our brothers, then government officials could be seen as our parents or in-laws. As in a family, these relationships are related but different, and we simply couldn't afford to have bad relationships with either one of them.

We sent the questionnaire to top (general or deputy-general) managers of a random sample of 400 firms (150 in Jiangsu and 50 each in Guangdong, Shandong, Zhejiang, Shanghai, and Anhui), using provincial governments' directories. Firms in Jiangsu were oversampled because that province was recommended by both a United Nations study (Byrd & Lin, 1989) and a National Council for U.S.-China Trade report (1991) as the most representative province in which to investigate Chinese firm behavior. In addition, Jiangsu had the highest industrial output in China at the time of the survey (CASS, 1997: 361). Together, Jiangsu and the other 4 surveyed provinces (but not Anhui) were the top 5 provinces in industrial output in 1995 (in the order shown above). Firms in Anhui, which was ranked as the 11th province in industrial output, were also included because we wanted to cover a broad range of firms in the country, not just those in high-output provinces.

After several rounds of phone, fax, and personal follow-ups, 127 questionnaires (31.75 percent) were returned (49 from Jiangsu, 12 from Guangdong, 16 from Shandong, 19 from Zhejiang, 21 from Shanghai, and 10 from Anhui). Prior research sug-

gested that in the absence of archival data, self-reported measures are acceptable, provided that care is taken to obtain data from reliable informants (Dess & Robinson, 1984). In this case, we left the respondents unidentified in order to alleviate their possible tendency to paint a "rosy picture" in the survey. Previous work has indicated that under anonymity, Chinese managers were more willing to provide accurate information (Tan & Litschert, 1994). In addition, postsurvey interviews were conducted with 32 top managers from 16 respondent firms (2 from each firm). We asked them to indicate in writing the influence of managerial ties and five other performance determinants on firm performance. The postsurvey reports were highly consistent with the survey responses (Pearson correlation coefficients ranged from .71 to .90) and between the two interviewees from each firm (Gunttman split-half reliability r ranged from .79 to .93), suggesting that the respondents provided valid responses in the survey.

In order to check the potential threat of common method variance, we employed three post hoc procedures suggested by Podsakoff and Organ (1986). First, we attempted to collect data at different times in order to check the reliability of responses. During 1998, approximately one and a half years after the initial survey, we re-sent the same questionnaire to 32 managers who responded earlier to the survey. Correlation analysis of 27 responses showed strong consistency in survey items between the two different periods, all at the .0001 level (Pearson coefficients ranged from .69 to .89). Second, in order to check the reliability of the data from a procedurally independent source, the same questionnaires were sent separately to 32 marketing managers of these same companies. The rationale was (1) that marketing managers did not participate in the original survey and (2) that the nature of these managers' work is more relationship-intensive, thus allowing them to offer a reliable assessment of the firms' managerial ties. The reliability test based on 23 responses suggested a high level of internal consistency between marketing and general managers for each respondent firm (Gunttman split-half reliability r ranged between .87 and .92). Finally, we consulted an authoritative archival source (CIBIC, 1996) and were able to find profitability, sales, and number of employees for 51 of the responding firms. The variations in these three areas between the two data sources were mostly smaller than 10 percent. Overall, these tests suggested little threat of common method variance.

In order to check the representativeness of the sample, we also compared key demographic traits of our 127 respondent firms with those of the

population of all Chinese enterprises. We used the official *China Statistics Yearbook* (SSB, 1995, 1996) to obtain the mean of all Chinese enterprises with regard to asset size, employees, sales, and profit growth. In a t -test of the mean differences between our respondent firms and the population, none of the t -statistics was significant ($p > .10$), indicating the representativeness of our sample. To test the internal consistency of the two managerial ties constructs, we also computed the Spearman-Brown r ; it ranged from .80 to .94, thus suggesting adequate internal consistency.

Variables and Measurement

The Appendix gives the text of key survey questions. The full set of variables was as follows:

Independent variables. The key independent variables were *ties with top managers at other firms* and *ties with government officials*. Because of the sensitive nature of our inquiry, detailed questions like "How much did you spend on gifts to government officials?" could have easily triggered non-response. Likewise, the name-generator approach often employed in social network analysis—asking respondents to name their contacts (Burt, 1997)—was found to be ineffective in our field study, because managers' personal ties were regarded as a personal and business secret, and some respondents were reluctant to disclose such contacts.² Given these conditions, we followed Peng (1997), Xin and Pearce (1996), and Yeung and Tung (1996) and asked more general questions in order to obtain reliable responses. Specifically, ties with managers at other firms were decomposed into relationships with (1) buyers, (2) suppliers, and (3) competitors, and ties with government officials were designated as connections with (4) political leaders in various levels of the government, (5) officials in industrial bureaus, and (6) officials in regulatory and supporting organizations such as tax bureaus, state banks, and commercial administration bureaus. Respondents were asked to assess their ties with these parties on a seven-point scale, ranging from "very little" to "very extensive." Their answers to the first three questions were averaged to create a composite measure of the ties with managers at other firms, and those for the other three questions were averaged to approximate ties with officials.

Contingency/control variables. First, *ownership* was defined by a dummy variable, coded 1 for

² Yeung and Tung (1996: 61), for example, quoted a Chinese executive who said "Who I know is exclusive information. I hardly make it known even to friends."

SOEs (71 firms) and 0 for non-SOEs (56 firms). Second, *business sector* was similarly measured by a dummy variable, coded 1 for manufacturing (99 firms) and 0 for service (28 firms). Third, *firm size* was defined by the number of employees. Sampled firms had a range of 50 to 6,000 employees, with a mean of 377. Lastly, *industry growth* was measured by the compound growth rate of pretax profits during 1993–95.³ The industry growth rates had a range of -14 to 63 percent, with a mean of 9.31 percent during the study period.

In addition to these variables, we also included five often-used strategy variables as controls, guided by the literature. First, *quality* in products and/or services indicates a major area in which a firm can distinguish itself in the marketplace, especially when pursuing a differentiation strategy (Porter, 1980). Second, competitive *pricing* requires operational efficiency, which is a prerequisite for a cost leadership strategy (Porter, 1980). Third, *advertising* plays a major role in affecting market shares and competitive success (Davies & Geroski, 1997). Fourth, effective *delivery* may differentiate a firm from its competition, in light of the generally poor transportation infrastructure in China (Child, 1994). Finally, *terms of payment* (credit policy) may also influence performance, since many firms are unable to collect payment from their buyers who, in turn, may have difficulties collecting money from their own buyers (Luo & Chen, 1997). This “triangular debt” phenomenon is not only extensively found in China, but also commonly encountered in other transition economies, such as Russia (Wright, Hoskisson, Filatotchev, & Buck, 1998: 92). Thus, a firm that can better deal with payment problems may be able to perform better. In sum, managerial ties alone may be “not enough to guarantee long-term success in China” (Yeung & Tung, 1996: 60); instead, according to the resource-based view (Barney, 1991), competitive strengths in

these capabilities may also have a positive impact on performance. This set of basic strategy variables is certainly not exhaustive, but including them allowed us to assess the magnitude of their contributions to performance vis-à-vis managerial ties. Each of these five variables was measured by the average response to a pair of questions using a five-point scale (see the Appendix).

Dependent variables. As a multidimensional construct, firm performance can be measured both financially and strategically. We chose to measure both dimensions by focusing on two variables, *return on assets (ROA)* and *market share*, averaged over the previous three years. Although there has been some debate concerning the use of ROA rather than return on sales (ROS) or return on equity (ROE) as a financial measure of performance, Markides found that “no matter which of the three profitability variables are used, the result remains unchanged” (1995: 114). We chose ROA for three reasons. First, except for a limited number of firms that are publicly listed (there were only 530 of them by the end of 1996), the equity contributions for a majority of Chinese firms are historically ambiguous, thus rendering it difficult to compute ROE. Second, ROS (profits/firm sales) significantly correlates with market share (firm sales/total industry sales). Given that market share was included as another performance variable, we chose a measure that was independent from market share. Third, ROA was not only our financial measure by default, but was also our preferred measure, because (1) accounting for assets in China is typically more accurate than that for equity, and (2) previous work in China has already used and validated this performance measure (Luo, 1995; Luo & Chen, 1997; Tan & Litschert, 1994).

In terms of the strategic role of market share, one school of thought is that, given the oligopolistic advantages of large firms, market share may be better regarded as a size variable than a performance variable. More recent research, however, has demonstrated that there is “considerable turbulence in market shares even among leading firms” (Davies & Geroski, 1997: 389). Although it is not clear whether a stronger market share can cause higher profits, these two constructs seem to be highly correlated (Oster, 1994: 131). In addition, the performance of top managers in China, especially SOEs, is routinely evaluated by their supervisory government agencies in terms of firm growth measured by market expansion (Walder, 1995). As a result, managers in China often state that market share is one of their

³ Although one might debate the appropriateness of using industry profitability, rather than industry sales, as a measure of industry growth, Jefferson and Xu (1991) suggested that in a Chinese context growth in profitability is a more accurate and appropriate measure. The sales growth of an industry in China does not necessarily lead to higher performance for individual firms because of two taxes, the progressive, industry-based value-added tax and the industrial and commercial consolidated tax, penalizing industries with high sales growth. We used before-tax profits instead of after-tax profits because different industries in China have different rates of taxation. Using net profits after tax might have distorted the actual profitability growth of an industry.

TABLE 1
Descriptive Statistics and Pearson Correlations^a

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12
1. Market share	3.24	3.31												
2. Return on asset	4.27	3.01	.43***											
3. Ties with other managers	3.69	1.01	.27***	.07										
4. Ties with government officials	2.97	0.58	.31***	.32***	.23*									
5. Ownership	0.56	0.49	-.48***	-.39***	-.19*	-.20*								
6. Business sector	0.78	0.41	-.07	-.35***	.05	-.18*	.42***							
7. Firm size	377	65.5	.14	.10	-.17*	-.21*	.23**	-.11						
8. Industry growth	9.31	3.22	.03	.25**	-.21*	-.21*	-.24**	.11	.08					
9. Quality	3.55	1.03	.60***	.55***	-.31***	-.22*	-.13	.02	.16	.06				
10. Advertising	2.63	2.11	.21*	.11	-.13	-.04	-.06	.40***	.34***	-.32***	-.13			
11. Pricing	2.88	1.63	.26**	.12	.05	.08	-.01	.05	.10	.14	.15	.22**		
12. Payment terms	3.29	2.08	.29***	.20*	-.11	-.14	-.16	.10	-.03	.18*	.15	-.02	.21*	
13. Delivery	3.60	1.88	.27**	.20*	-.15	-.16	.12	-.01	.21*	-.04	.16	-.06	.11	.10

^a $N = 127$.

* $p < .05$

** $p < .01$

*** $p < .001$

most important performance goals (Byrd & Lin, 1989; Peng, 1997), thus further justifying our focus on this variable.

Except for very small firms, the majority of Chinese firms are members of their industry associations. These associations usually follow the four-digit groups identified by Chinese Industrial Classifications (CIC), which are similar to four-digit Standard Industrial Classification (SIC) codes (but do not overlap completely). These industry associations collect information about market shares and issue reports quarterly or biannually to member firms. In our cover letter, we asked respondents to refer to their associations' reports when calculating their market shares and to report a firm's sales divided by its industry's total sales as reported by the association. Using reliable secondary sources (CIBIC, 1996; SSB, 1995, 1996), we were able to find profitability for 51 respondent firms and market share for 36 of them. The variations between the survey and the archival sources were mostly smaller than 10 percent ($p < .001$), suggesting that the self-reported performance data were in general reliable.

Analytical Approach

To test the first two hypotheses, we regressed managerial ties with performance measures while controlling for contingency and control variables. Variance inflation factors (VIF) did not show sig-

nificant multicollinearity ($VIF < 2.87$).⁴ Normality was checked with a modified Kolmogorov-Smirnov test. The results (.06–.08) supported the validity of the univariate normality assumption. We also conducted a multivariate analysis of variance (MANOVA) to assess the relative importance of managerial ties and other variables to overall firm performance. Since a requirement of MANOVA is that criterion variables be correlated, the appropriateness of this multivariate technique was validated by the test for sphericity (Mauchly's criterion = .69, $p < .001$). Subgroup regression was then

⁴ There was one exception, a case in which the business sector dummy was used as one of the controls. The business sector effect and the industry growth effect overlapped when both were controlled in regression models, because the business sector dummy is one of the ways to broadly control the industry effect. As a result, when both sector and industry dummies were included in regression models to control the industry effect, multicollinearity problems became more severe (VIFs for some models were close to 10). This threat was removed when only the industry growth effect was used to control for industry. Consequently, we dropped the business sector dummy from the regressions. Given that using the industry growth effect is a fine-tuned way to control for industry, dropping the coarse-grained business sector dummy was not deemed to be a major problem. Nevertheless, the business sector dummy was still used to separate manufacturing firms from service firms when we conducted subgroup analysis to test Hypotheses 4a and 4b.

TABLE 2
Results of Standardized Regression Analysis and MANOVA^a

Variable	Market Share			Return on Assets			MANOVA	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Wilks's λ	F
Managerial ties								
Ties with other managers	.31**	.27**	.19*	.12	.07	.07	.81	13.11***
Ties with government officials	.38**	.29**	.22*	.28*	.24*	.15 ⁺	.75	20.66***
Control variables								
Strategy variables								
Quality		.34***	.32***		.36***	.27***	.44	72.03***
Payment terms		.23**	.14 ⁺		.13	-.07	.85	9.50***
Advertising		.19*	.13 ⁺		.12	.05	.89	6.26**
Pricing		.11	.06		-.03	.04	.96	1.89
Delivery		.05	.04		.06	.03	.98	1.10
Other								
Ownership			-.09			-.22*	.80	15.01***
Firm size			-.05			-.29***	.69	33.52***
Industry			-.14			.18*	.80	15.88***
Interactions ^b								
Ties with other managers \times quality			.29 ⁺			.30 ⁺	.78	18.55***
Model F	5.07	16.55	25.05	3.14	9.33	29.56		
p <	.001	.001	.01	.001	.001	.001		
Adjusted R ²	.18	.62	.73	.11	.38	.78		
Model df	2	7	11	2	7	11		

^a N = 127.

^b Interactions between managerial ties and other strategy variables are insignificant and not reported.

⁺ p < .10

* p < .05

** p < .01

*** p < .001

conducted as a test of the contingency hypotheses (3a–6b). In addition, Chow tests, which can identify whether the regression estimates of two subgroups are significantly different, were also independently employed.

RESULTS

Table 1 provides descriptive statistics and correlations. It shows that personal ties with top managers at other firms and with government officials are both significantly correlated with market share ($p < .001$). In addition, ties with government officials are positively correlated with ROA ($p < .001$), which has no significant correlation with ties with managers at other firms. Table 2 reports both standardized regression and MANOVA test results. Regression results show that for Hypothesis 1, ties with managers at other firms have a significant and positive impact on focal firms' market shares both before (model 1: $\beta = .31$, $p < .01$) and after the entry of control variables (model 2: $\beta = .27$, $p < .01$;

model 3: $\beta = .19$, $p < .05$). However such ties have no important effect on ROA (models 4, 5, and 6). Thus, Hypothesis 1, on the performance impact of managers' ties with managers at other firms, is partially supported. One manager shared his view to help us make sense of these findings:

For a startup like us, it is absolutely critical to have good relationships with our diverse clients. . . . So we have worked hard to be their friends, by sending them gifts, taking them out to dinner, and occasionally giving them "red envelopes" [containing cash]. . . . Don't ask me how much money there is in the "red envelope," I don't remember. But my point is that this money has to come from somewhere; we don't print money. These activities directly reduce our profits. But as long as they keep buying our products, we figure it is worthwhile for us to build a large market share.

Ties with government officials (Hypothesis 2), on the other hand, have a consistently significant effect on both indicators of firm performance, regardless of whether we controlled for strategy and con-

tingency factors (models 1 through 6 in Table 2), thus strongly supporting Hypothesis 2. The following quotation supported our findings:

All of these officials, who can be regarded as your "mothers-in-law," absolutely have to be pleased. If you fail to do that, you may be forced to close your factory without knowing what's wrong at all On the other hand, if these "in-laws" are happy, they can make life a lot easier for you. Sometimes they make you think they have the magic touch to make anything happen. For example, they can procure cheaper materials for you, provide priority access to infrastructure, and promote your products in state-controlled distribution channels.

Results from the MANOVA test, also shown in Table 2, provide further support for Hypotheses 1 and 2. Both ties with managers at other firms and ties with government officials are important to overall performance ($p < .001$). Nevertheless, as in the regression results, managerial ties with government officials were more important to overall performance ($F = 20.66$) than ties with managers at other firms ($F = 13.11$).

Having found support for Hypotheses 1 and 2, we then examined the impact of strategy variables on firm performance. Models 2 and 5 show that quality is important for both market share and ROA ($\beta = .34$ and $.36$, respectively, both $p < .001$). In addition, payment terms (model 2: $\beta = .23$, $p < .01$) and advertising (model 2: $\beta = .19$, $p < .05$) also have significant impacts on market share. Further, models 3 and 6 present coefficients for the two full models for market share and ROA, with managerial ties, strategy variables, and other control variables. Again, the results are consistent with models 2 and 5: although managerial ties are significant (except in the case of the link between ties with other managers and ROA in model 6), quality appears to be the most important driver of both market share (model 3: $\beta = .32$, $p < .001$) and ROA (model 6: $\beta = .27$, $p < .001$). Also, payment terms and advertising have a positive influence on market share (model 3: $\beta = .14$ and $.13$, respectively, both $p < .10$).

The MANOVA test supports the findings from regression models. It shows that as far as overall performance is concerned, managers viewed quality as being most important ($F = 72.03$, $p < .001$), and then ties with officials and with other managers ($F = 20.66$ and 13.11 , respectively, both $p < .001$), payment terms ($F = 9.50$, $p < .001$), and advertising ($F = 6.26$, $p < .01$). As an exploratory analysis, Table 2 also reports the interaction between ties with other managers and quality, which has a significantly positive effect on market share (model 3: $\beta = .29$, $p < .10$) and ROA (model 6: $\beta =$

$.30$, $p < .10$). This finding implies that firms that simultaneously possess both good business ties and superior quality are more likely to attain strong performance.⁵

Table 3 reports a series of subgroup analyses testing the contingency hypotheses (3a–6b). In addition, we conducted Chow tests to independently verify the results of the subgroup analyses. Overall, the Chow test results corroborate the findings of the subgroup analyses, except for models 1 and 3, about ties with managers at other firms. Specifically, testing Hypothesis 3a, the subgroup analysis shows that managerial ties with other businesses are important to market share for both SOEs (model 1: $\beta = .15$, $p < .10$) and non-SOEs (model 3: $\beta = .23$, $p < .05$). The Chow test actually suggests that these ties have a stronger impact for non-SOEs than for SOEs ($F = 9.23$, $p < .001$). Such connections, however, do not contribute to ROA regardless of ownership type (models 2 and 4). Hypothesis 3a is thereby partially rejected. Nevertheless, managerial ties with government officials are not associated with any performance measure for SOEs (models 1 and 2). These ties, however, have a significantly positive impact, as predicted, on market share (model 3: $\beta = .30$, $p < .01$) and ROA (model 4: $\beta = .20$, $p < .05$) for non-SOEs. Thus, there is a stronger, positive relationship between ties with officials and performance for non-SOEs than for SOEs, thus supporting Hypothesis 3b. Overall, ties with other managers affect firm performance similarly for both SOEs and non-SOEs (they are good for market share but have no effect on profitability). Ties with officials, however, are more likely to improve performance for non-SOEs than for SOEs.

Testing Hypotheses 4a and 4b, we found that managerial ties with executives at other firms are important to market share for both the manufacturing (model 5: $\beta = .19$, $p < .05$) and service sectors (model 7: $\beta = .24$, $p < .01$). In this regard, the type of business sector does not seem to moderate the relationship between managerial ties and market share, thus not supporting Hypothesis 4a. However, managerial ties with government officials are significantly beneficial to service firms' ROA (model 8: $\beta = .22$, $p < .01$) but have no impact on the ROA of manufacturing companies (model 6). In other words, Hypothesis 4b is supported as far as ROA is concerned. But the support for Hypothesis 4b is only partial, since there is no difference be-

⁵ We examined all other possible interaction effects between managerial ties and other strategy variables in separate tests. The results showed no significant impact on performance.

tween manufacturing and service firms in terms of the impact of ties with officials on their market share; both are significant (model 5: $\beta = .19$, $p < .05$ for manufacturing; model 7: $\beta = .27$, $p < .01$ for service).

Concerning Hypotheses 5a and 5b, Table 3 reveals that for smaller firms, ties with managers at other firms have a positive influence on both market share (model 11: $\beta = .23$, $p < .01$) and ROA (model 12: $\beta = .16$, $p < .10$). For larger firms, however, the effect of such ties is significant for market share (model 9: $\beta = .20$, $p < .05$) but not for ROA (model 10). In other words, the rate of return from investing in relationships with managers at other firms may be higher for smaller firms, thus partially supporting Hypothesis 5a. This support, however, is only marginal ($p < .10$, model 12). The subgroup analysis further suggests that ties with government officials are significantly important to smaller firms' market (model 11: $\beta = .34$, $p < .001$) and financial performance (model 12: $\beta = .24$, $p < .01$) but not crucial to larger firms' performance (models 9 and 10). This finding therefore strongly supports Hypothesis 5b.

Results for the tests of Hypotheses 6a and 6b suggest that, for firms in high-growth industries, ties with other managers lead to neither higher market share (model 13) nor higher ROA (model 14). However, such ties have a significantly positive impact on the two performance measures for firms in low-growth industries (model 15 on market share: $\beta = .23$, $p < .01$; model 16 on ROA: $\beta = .15$, $p < .10$). Hypothesis 6a is hence supported. Managerial ties with government officials, on the other hand, are found to have a significant impact on the two performance measures for firms in both kinds of industries (models 13–16), thus failing to support Hypothesis 6b.

It is important to note that all 16 subgroup models in Table 3 are significant ($p < .001$) and are able to explain between 30 (model 4) and 66 percent (model 15) of the variance. Moreover, the Chow test results are consistent for 14 of the 16 models (except models 1 and 3 for ties with other managers, as noted above). Overall, these results suggest that the contingency perspective was reasonably valid.

DISCUSSION AND CONCLUSION

Contributions

Although set in the context of China's transition economy, this study was motivated by a more fundamental theoretical interest in assessing the strength of an important micro-macro link (Peng, 2000). Although the idea that the social capital

embodied in managerial ties and networks matters in an uncertain environment is hardly controversial, few scholars have taken on the challenge suggested by Powell (1996: 297) to specify the nature of such a link. This study, an initial step in this direction, indicates a direct and unambiguous link of the type that Mizruchi and Galaskiewicz (1994: 241) called for. Our efforts to acquire a relatively large and diverse sample, care in checking data reliability (Podsakoff & Organ, 1986), and "triangulation" of the quantitative findings (Jick, 1979) with qualitative data (Peng, 1997) represent major methodological improvements over previous studies, leading to more robust, finer-grained, and more generalizable results.

Four sets of ideas and findings distinguish this study. First, we theoretically and empirically differentiated the two types of managerial ties. Our results indicate that ties with officials are more important than ties with managers at other firms, suggesting that firms may have greater resource dependence on officials than on other firms. It appears that, given the considerable power that officials have in a transition economy, good relationships with them have a stronger impact on firms' market and financial bottom lines, even after the considerable costs of building and sustaining these ties (including gifts, banquets, and bribery) are taken into account. Existing studies on the micro-macro link, often based on firm experience in the West, mostly focus on managers' ties with their peers at other firms. Our results thus suggest a necessity for scholars to conceptually differentiate these two types of managerial ties, especially when undertaking research in transition economies where the role of the government is still substantial.

Second, through a contingency perspective, we were able to identify under what circumstances managerial ties are beneficial. Specifically, the impact of personal ties with managers at other firms on market share is likely to be stronger for firms in low-growth industries. Such an impact appears to be equally useful for firms regardless of their ownership, size, and sector. The impact on ROA of ties with other managers is more powerful for firms that are in the service sector, small, and/or in low-growth industries; these ties, however, have little influence on ROA for both SOEs and non-SOEs. Similarly, firms that are more likely to benefit from ties with government officials both in terms of market share and ROA are those that are non-SOEs, in the service sector, and small. These ties seem to be equally useful for firms in both high- and low-growth industries. In contrast to a broad-brushed statement, like "managerial ties are always help-

ful," our findings provide a fine-grained understanding of the much-heralded but little-explored micro-macro link.

Third, we were also able to identify the limitations of managerial ties (Table 2). Specifically, managerial ties alone accounted for only 18 and 11 percent of the variance (still significant) in market share (model 1) and ROA (model 4), respectively. When strategy variables were added as controls, the fit of the two models improved dramatically, explaining 62 and 38 percent of the variance in market share (model 2) and ROA (model 5), respectively. The implication is very clear: Although managerial ties are important, a firm also needs to have capabilities in areas such as quality and advertising in order to perform well. The significantly positive interaction effect connecting managerial ties with quality (models 3 and 6) is also indicative of this point. In short, our findings support important but untested arguments raised by Tsang (1998) and Yeung and Tung (1996) in that connections alone were necessary but not sufficient for good performance.

Finally, our findings indicate that it is easier for managerial ties to have an impact on market share than on ROA. There may be three underlying reasons. First, developing managerial ties requires cash outflows in the form of banquets, gifts, and entertainment, which may help improve market share but may be a direct drain on firms' financial returns, at least in the short run. Second, there may be a time lag effect in that firms need to improve their market positions first before financial performance can be improved. Third, at many firms, especially large SOEs where governance is weak, managers may be more interested in increasing market share than ROA. Such a preference may be a part of the output-driven legacy of the planned economy, but agency problems (Jensen & Meckling, 1976) may also come into play. Improving corporate governance by hardening the budgets of these firms may help curtail some of these agency problems and lead to stronger financial bottom lines.

In summary, theoretically, our findings help establish a direct micro-macro link, by highlighting the differences between two types of managerial ties, exposing their limitations, and supporting a contingency perspective. Empirically, this study propels research on firm behavior in transition economies from a largely conceptual and qualitative phase to a fine-grained, quantitative phase.

Research and Practical Implications

For researchers, theoretically driven analyses of critical relationships such as the micro-macro link

can help move the market transition literature to the center stage of social science research (Peng, 2000). Future work can probe deeper into the impact of alternative types of ties, such as ties with individuals sharing previous senior management experience in the same firm or government agency (Hambrick & Mason, 1984), managers sharing demographic similarities (Tsui & Farh, 1997), managers in the same or different industries (Geletkanycz & Hambrick, 1997), and/or officials in different levels of the government (Walder, 1995).

Given that strategic choices are inherently affected by decision makers' national culture, it is not surprising that Chinese managers, who have a widely noted cultural propensity to rely on informal ties, resort to personal connections to achieve organizational goals (Luo & Chen, 1997). However, Boisot and Child (1996) and Peng and Heath (1996) argued that, in addition to cultural influences, institutional imperatives during market transitions may further necessitate the extensive reliance on personal exchange relationships. Such an institutional interpretation is borne out by similar findings from other transition economies such as Hungary and Russia, where there is little influence of the Chinese (or Asian) culture that puts a premium on interpersonal ties. For example, managerial ties in post-1989 Hungary were found to be more "relational" and more similar to "Asian" practices than to arm's-length, "Anglo-Saxon" practices (Whitley, Henderson, Czaban, & Lengyel, 1996: 409). Despite the cultural differences, similar institutional imperatives during the transitions must have played an important role in leading to similar managerial behavior in Eastern Europe and China. Therefore, it will be fascinating to see whether our findings from China can be generalized to other transition and emerging economies (Peng, 2000).

For practitioners in China and those interested in doing business there, our findings rigorously support their long-held belief that managerial ties are crucial for business success. However, this study also reveals the limits of these ties. Specifically, despite the conventional wisdom, managerial ties alone may not be enough. A successful firm also needs to have a number of strengths in traditional areas such as quality and advertising (Luo & Peng, 1999). Thus, beyond a certain limit, managers' time and resources may be better spent on developing these strategic capabilities than on engaging in excessive networking.

Top officials in China and other transition economies have called for the elimination of corruption, but it appears that some members of government agencies may be a significant source of the problem. As long as the boundaries between state and

firm remain blurred, managers will always have a strong incentive to cultivate ties with officials. Hope seems to lie in institution-building efforts, whereby managers, especially those at young, small, non-SOEs in service industries, will have faith in the system as opposed to their contacts.

Limitations and Future Research

The first limitation of this study is that we did not assess the possible effect of firm performance on managerial ties. The relationship we focused on may not be causal. Even Granovetter conceded that "the level of casual analysis adopted in the embeddedness argument is a rather proximate one" (1985: 506). For example, firm performance may generate managerial ties, since managers at better-performing firms tend to be more attractive business associates and contacts than managers at less successful firms. Given such inherent causal ambiguity, integrating the social capital perspective with transaction cost theory (Williamson, 1985) may at least partially help overcome this problem by identifying the origins and conditions giving rise to these ties.

Second, in this study we relied primarily on perceptual measures and were unable to employ some of the more sophisticated quantitative techniques typically found in social network analysis (e.g., Burt, 1997). Extensive use of perceptual measures in micro-organizational analysis as well as the practical difficulties of data collection in China necessitated our approach. Since the soft nature of personal ties and networks will probably continue to warrant the use of perceptual measures, obtaining performance measures from archival sources, which we attempted with limited success, may improve the rigor of the results in future studies.

Finally, this study did not distinguish between competitive and noncompetitive firms. In fact, quality had a significantly negative correlation with managerial ties (Table 1). This may imply that a more competitive firm may need—but not rely on—such ties, whereas a less competitive one may rely more on such ties. Future studies should diagnose the role of managerial ties within a complex set of strategy and managerial tactics. A more reliable and valid measure of firm competitiveness in transition economies is also warranted.

Conclusion

Influenced by sociological claims that the social context in which managers are embedded influences their strategic choices and affects the perfor-

mance of the firms they lead, this study has extended previous work on the link connecting managerial ties and firm performance to a transition economy. In particular, it highlights both the extent to which managerial ties are beneficial and the limits of those ties. This micro-macro link is a powerful idea, allowing one to conceptualize the opportunities and constraints facing managers and firms in the pursuit of their personal and organizational goals. Although understanding of this critical link needs to be broadened and deepened around the world, much more research remains to be done in transition economies, since currently researchers know very little about organizational dynamics in these societies (Peng, 2000; Peng et al., 2001). A better understanding of the micro-macro link in these countries will not only help practitioners improve their effectiveness, but will also greatly enrich the scholarly literature on interpersonal ties, organizational strategies, and firm performance.

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APPENDIX

Key Questionnaire Items

Ties with managers at other firms. “Please circle the number best describing the extent to which top managers at your firm have utilized personal ties, networks, and connections during the past three years with (1) top managers at buyer firms; (2) top managers at supplier firms; and (3) top managers at competitor firms.” (seven-point Likert scale, from “very little” to “very extensive”)

Ties with government officials. “Please circle the number best describing the extent to which top managers at your firm have utilized personal ties, networks, and connections during the past three years with (1) political leaders in various levels of the government; (2) officials in industrial bureaus; and (3) officials in regulatory and supporting organizations such as tax bureaus, state banks, commercial administration bureaus, and the like.” (seven-point Likert scale, from “very little” to “very extensive”)

Strategy variables. “Please circle the number best describing the extent to which your firm has performed better with respect to the following business strategy variables relative to close rivals during the past three years: (1) product/service quality (reliability and innovativeness); (2) terms of payment (lenience and length of credit); (3) delivery (promptness and cost effectiveness); (4) pricing (appropriateness of high or low pricing strategy, and pricing differentiation across products/services, customers, season, and quantity); and (5) advertising (appropriateness of media and appropriateness of content).” (five-point Likert scale, from “very inferior” to “very superior”)

Firm performance. “Please provide your firm's (1) average market share in the industry during the past three years (%); and (2) average return on assets (ROA) during the past three years.” (%)

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