Building Core Competencies in a Turbulent Environment: An Exploratory Study of Firm Resources and Capabilities in Chinese Transitional Economy

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The impact of firm resources and capabilities on performance among Chinese enterprises has been a subject of anecdotal speculation due to its significant implications for organizational researchers as well as practitioners. Yet empirical evidence has been very limited. In this research, set in the People's Republic of China, we examine firm resources and capabilities and their impact on firm performance among Chinese enterprises. Using large sample of 12,047 Chinese firms from 1991 to 1992, we found that most of the firm specific resources and capabilities examined in this study have a positive impact on performance. We discussed the implications for organizational researchers, policy makers, and managers, and proposed directions for future research.

Key Words: economic transition, firm strategy, resources and capabilities
JEL *Classification:* M10, L10, L20.

Introduction

In recent years, the study of firms operating in China's transition economy has attracted growing attention from mainstream organizational researchers. As the Chinese economy increasingly becomes integrated into and plays an important role in the global economy, an understanding of organizational issues in China has not only economic implications, but theoretical significance as well. Since China differs from Western mar-

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ket economies in varying dimensions, it offers fascinating grounds for testing existing organizational theories and advancing new ones.

Understanding firm performance differences and sources of sustained competitive advantage has been a major area of research in the field of strategic management (Porter 1985; Rumelt 1991). Since the 1960s, a major framework has been used to structure much of this research. This framework suggests that firms obtain sustained competitive advantages by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses. Most research on sources of sustained competitive advantage has focused either on isolating firm's opportunities and threats, describing its strengths and weaknesses, or analyzing how these are matched to choose strategies. For researchers following industrial organization economics (e. g., Porter 1980; 1985), the primary concern is to identify those structural characteristics that contribute to industry attractiveness and consequently, superior firm performance, in order to provide policy implications on how firms can favorably position themselves. For resource-based view theorists (e. g., Barney 1991), the ultimate goal is to learn what resources and capabilities firms contribute to sustainable competitive advantage, so that firms can acquire and develop these resources and capabilities.

These theories, regardless of their conceptual orientations, were developed from market-based economies. Their applicability in other economic contexts, such as the centrally planned economies undergoing transition toward market economies (e. g., China, the former Soviet republics, and East European countries), is yet to be established. As these emerging economies become increasingly integrated into the global market, improved knowledge has become an urgent challenge to organization researchers as well as practitioners. As organizational theorists continue to debate on the merit of these perspectives, multinational corporations have to compete in these emerging markets.

In this study, we join the debate by testing the resource-based theory in China. The purpose of the study is to identify what firm-specific resources and capabilities have contributed to firm performance.

Economic Transitions, Environmental Turbulence, and Firm Strategies

As a legacy of the Soviet-style command economy, the pre-reform industrial structure in China was characterized by rigid central planning and extensive government control of state-owned enterprises (SOEs, see

Perkins 1994; Tung 1982). Firm-level decision making among SOEs was focused on aligning with administrative bodies, regulatory bureaus, and, in some cases, local governments (Child 1994; Nee 1992). Consequently the pre-reform SOEs had very limited decision-making prerogatives and were not quite concerned with performance.

The transition from a planned economy to a market economy 'changes fundamental managerial assumptions, criteria and decision making, and represents a genuine transformation of the business' (Tan and Litschert 1994, 3). These transitions since 1978 have created a great deal of turbulence for SOEs (Child 1994). As the state gradually relinquishes its financial responsibility for SOEs, these firms, especially their managers, are increasingly being held responsible for their performance (Peng 1996). As a result, the stable comfortable environment based on the network of interlocking relationships has disappeared. Instead, SOEs are being given more autonomy, and, hence, more financial responsibilities (Perkins 1994; Tan and Litschert 1994). Although most SOEs are newcomers to the game of competition, they are nevertheless under stress to learn the game fast for two reasons. First, a great number of Western multinationals have penetrated the China market and created pressures for local firms. Second, the new environment has also introduced a new class of private and collective firms, which are more entrepreneurial than their SOE counterparts. Being 'stuck in the middle', SOEs can no longer afford to be passive now but have to join the competition.

To many strategic management researchers, Porter's seminal work on competitive strategy (1980) and advantage (1985) represents an important perspective on competitive advantage. However, such a perspective only offers partial answer to firm level competitive advantage since firm resources and internal capabilities vary widely. From the strategic management standpoint, these firm differences can prevent certain firms from implementing strategies that other firms can implement (Barney 1986). While all firms face the same environment, which has profound impacts on firm performance, the structural characteristics cannot explain why some firms perform better than others. To understand performance differences, we consider the resource-based view as an alternative explanation to firm performance.

The resource-based view of competitive advantage has its conceptual origins in the work of Chamberlin (1933), Penrose (1959) and Chandler (1962). As discussed by Wernerfelt (1984), a firm's resources are the fundamental determinant of competitive advantage. Accordingly, resource constraints will limit a firm's performance. The resource-based view of

the firm substitutes two alternative assumptions in analyzing sources of competitive advantage. First, firms may be heterogeneous with respect to the strategic resources they possess. Second, these resources may not be perfectly mobile across firms, and thus heterogeneity can be long lasting. In other words, strategically relevant resources are those that are valuable, rare, difficult to imitate, and without strategic substitutes. Based on these, firms develop a sustained competitive advantage (Barney 1991).

In this article, firm resources include all assets, capabilities, organizational processes, firm attributes, information, and knowledge, controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness (Barney 1986; 1991). In the language of traditional strategic analysis, firm resources are strengths that firms can use to conceive of and implement their strategies (Porter 1980). The attention of the resource-based view is primarily internal with its focus on the characteristics and capabilities of the firm. First, that a particular form of resource is valuable refers to the ability of the firm to utilize the resource to exploit specific opportunities or to neutralize certain threats. Therefore the value of a resource is firm-specific, since a firm's relationship to its environment (opportunities and threats) is unique. Consequently, the unit of analysis is the resources of the firm, and the focus is on the relationship between resources and competitive advantage, or firm performance. Furthermore, firm resources must be rare in order to be of strategic use. That is, if many firms have equal access to the same resource, the resource's utility in producing competitive advantage is limited. Finally, resources and capabilities must not be easily copied. If other firms are able to emulate the resources and capabilities easily, the performance advantage will be competed away. This is not to say, however, that imitation is not possible. As firms escalate their competition, and imitation becomes widespread, winning attributes are increasingly becoming the target of imitation. In this sense sustainability should be considered as a relative term.

In transition economies, both market forces and the legacy of central planning are influencing firm performance. SOEs are partially liberated from the central planning. Using the running metaphor earlier, the athletes are now encouraged to run with their feet freed, although their hands are still tied up. Although they face the same imperfect market conditions typical of transition economies, they can nevertheless run. The critical issue they face is to identify the particular muscle groups (resources) that help them improve performance.

For resource-based view theorists, history plays an important role since firm resources and capabilities are attained over time, often in a unique fashion (Barney 1986). One of the more interesting characteristics of capabilities is that they are path dependent, which is to say that an organization's future behavior is constrained by its historical routines and past investments (Teece, Pisano and Shuen 1997). Previous theorists have introduced path dependence using the simple conceptualization that 'history matters' to focus attention on the importance of initial conditions in predicting path direction (Teece et al. 1997). Capabilities are specific to the firm and embedded in operational routines and, as such, are accumulated over time (Dierickx and Cool 1989; Makadok 2001). Once these capabilities have been accumulated, firms develop a cost advantage for using practiced routines, relative to experimenting with new processes, reinforcing previous choices (Zollo and Winter 2002). This implies that future resources will reflect a pattern of integration and reconfiguration similar to historical resources. However, there has been very limited effort to empirically examine the impact of specific inputs on firm performance in China's transition economy. As a result our understanding of the trajectories of these paths of evolution and the processes which shape them has yet to be fully explored, and there is little information in the literature or empirical evidence that will lead to a set of testable hypotheses. In this study we explore what specific resources and capabilities have led to superior performance.

Research Design and Data Collection

Mainstream perspectives such as industrial organization economics and resource-based view theories grew out of the behavior of firms operating in a market economy. Whether they can be plausibly extended to a Chinese setting remains to be debated (Peng 1996; Pye 1992; Tan and Litschert 1994). While Shenkar and Von Glinow (1994) called for extreme caution when extending mainstream theories to China, other researchers have demonstrated the applicability of some of these theories in the Chinese environment, as long as institutional variations are accounted for (e. g., Tan and Litschert 1994). As Western management theories are introduced to the Chinese audience, and as Chinese managers compete and cooperate with their Western counterpart, they become familiar with theories, concepts, and terminology from Western management literature (Tan and Litschert 1994).

In the past, organizational research set in China has employed quali-

tative as well as quantitative methods. In many cases, since large-sample, firm-level data are difficult to collect in China, most existing studies have relied on case studies. Although highly insightful for theory development, case studies are less useful when the objective of the research is theory testing. This study joins the handful of studies on SOEs in China that used quantitative analysis of data from a relatively large sample to test theories.

DATA

The data set for this study comes from the 1991 and 1992 Survey of Large and Medium Industrial Firms in China (SLMIF) conducted by the State Statistical Bureau of China (SSB). It includes all firms in China that are categorized by the SSB as 'large' or 'medium'. The number of firms in the database ranges from 14,942 (1991) to 16,384 (1992). The total sales of the all the firms in the 1992 SLMIF are RMB 1,544 billion (USD 182 billion), accounting for 42 percent of total industrial output (SSB 1995, 375), thus indicating that the data set represents a substantial part of business activities in China.

The SSB reports that the accuracy of the information in the survey, in particular the financial data, has been carefully checked. For example, sales information is often checked against actual output so as to detect discrepancies (SSB 1994). The SSB uses a logic-testing method, which links related variables together to identify illogical data, and a historical method that tracks an enterprise's historical data. In its survey and report system manual, the SSB specifies more than 120 logic tests for major project surveys and more than thirty logic tests for industrial surveys (SSB 1994). The SSB industrial survey data has been used in different forms by academics in the social sciences. Since this is the most authoritative official survey, which has been used by the state government for making major economic decisions, the reliability has been tightly monitored, and any inaccuracy and deviation from accounting regulations has been strictly disciplined. Consequently, this is the most accurate and reliable archive data in China.

MEASUREMENT AND VARIABLES

In this study we used the 1991 firm internal variables as independent variables, and the 1992 performance measures as dependent variables. Independent variables and controlled variables were extracted from the 1991 data. They are briefly described below.

1. *Outsourcing* is measured by the amount of materials, energy, electricity, and other inputs that were purchased from external suppliers, as opposed to those produced by the firm's own subsidiaries. From a resource dependence perspective (Pfeffer and Salancik 1978), such vertical integration reduces firm dependence and uncertainties associated with such dependence. However, overemphasis on vertical integration and diversification burdens firm's resource, leaving little for future growth. When markets were introduced after the beginning of the reform, increasingly resources were no longer allocated by the state but rather through the market, and firms began to rely on outsourcing. Outsourcing allows the firm to concentrate in its core business, thereby improving its performance. Overall, we would expect outsourcing to have a positive impact on performance.
2. *Earmarked Special Funds.* We devised three composite measures under this category based on fund similarities. They are (1) depreciation and major repair funds, (2) new product development and production expansion funds, and (3) employee reward and welfare funds. These three measures were all based on the means of the two funds in each category, respectively. These funds are usually accumulated as a portion of previous year's total sales revenue and are used for specific purposes. For instance, major repair funds and depreciation funds are taken as a percentage of the value of the firm's capital equipment. According to government regulations and accounting procedures, they should be used for the repair or replacement of major equipment. However, it is not a secret that some managers use these funds as 'slack' accounts temporarily for other needs. Special funds also include those used for new product development and production expansion. Finally, there are those funds accumulated for employee reward and welfare.
3. *Reserve Fund* is based on the amount reported. This type of fund is used on a contingency basis for daily operations. It is similar to slack resources, with more flexibility than earmarked special funds. Previous research in market economies indicates that slack funds provide a 'cushion' during environmental turbulence and help the firm to sustain smooth operation (Bourgeois 1981, 30).
4. *Inventory* is measured by the value of unsold products. This includes funds that are utilized in the form of inventory.

5. *Borrowing Capacity.* The capability to borrow from lending agencies is quite often a strong indicator of firm's unique position. Even in Western literature, borrowing capacity has been considered as an unused slack resource that can be used for strategic purposes. In this case we would expect this resource type to contribute positively to performance.
6. *Marketing Intensity.* This includes a firm's effort in marketing. Under central planning, there was no need for marketing. Before the economic reform, the Chinese market, both factor input and consumer market, were characterized by shortage. In such a seller's market, the prevailing paradigm is 'Emperor's daughter should not have to worry about getting a suitor.' The reform has changed the fundamental rule of the game and Chinese firms now find themselves at the mercy of customers. Among those firms we studied, the most successful ones often demonstrate good marketing capabilities. We thus expect marketing intensity to be positively associated with most measures of performance.
7. R&D *Capability* is measured by the percentage of scientists and engineers who specialize in new product development and research to total employees. In Chinese industrial enterprises, R&D personnel are specially designated based on their education, qualification, and specific functions they perform in the firm. Numerous studies suggest that firm's R&D has significant impact on performance (e. g. Hill and Jones 1995).
8. *Retained Earning* is measured by the amount of retained earnings at the end of the fiscal year. These are perhaps the most flexible resources that managers can legitimately use for discretionary purposes. As a major step toward revitalizing the stagnant industrial sectors and giving firms incentives to improve performance, the Chinese government has implemented a 'responsibility system', which gives a greater residual claim right to the firm as a function of performance. If a firm's performance exceeds a contracted level, the residual profit will be shared between the government and the firm in the form of retained earnings. Managers have much greater freedom to decide how they spend the money since these funds are uncommitted, or unutilized.
9. *Performance* was measured using the 1992 total revenue and profit (loss). We also created revenue per employee and profit per asset

(or return on assets) to obtain a more standardized measure of productivity and profitability. Regressions are conducted on these four dependent variables, namely, revenue, profit, revenue per employee, and profit per asset.

We included also three controlled variables. They are fixed capital of a firm, workforce of a firm, and firm ownership. The first two variables measure firm size.

10. *Fixed Capital* is the total fixed capital of a firm.
11. *Workforce* is the total number of employees of a firm.
12. *Firm Ownership Type* is measured by using the official firm ownership type code designated by the SSB. It is '1' if a firm is an SOE and '0' if it is a collective, private, or foreign-funded firm.

Data Analyses and Results

Table 1 provides information about descriptive statistics and correlation coefficients. We first examine the zero-order correlation coefficient matrix of all independent variables for potential sources of multicollinearity (see table 1). As can be seen from table 1, the correlation coefficients between different funds are quite high, which may cause multicollinearity problems in the multiple regression analysis. In order to avoid such problems, we first conduct a factor analysis on all independent variables and then use factors along with the controlled variables as regressors in our models.

Our factor analysis generated two factor coefficients (see table 2). The first factor seems to represent all slack resources. Outsourcing also has a high loading on the first factor. The second factor seems to present R&D and new product development effort. Marketing intensity has high loadings on both factors.

We used regression analysis to test various relationships (see table 3). We tested the effects of resources and capabilities on the four dependent variables – total revenue, total profit, revenue per employee, and return on assets, while controlling firm size and ownership.

All four regressions reveal significant relationships between measures of firm resources and capabilities and performance. Measured by four different performance variables, the results are consistent and the factors significantly affect both revenue and profit in the predicted direction. The consistency across four measures indicates that the results are robust.

TABLE 1 Means, standard deviations, and correlation coefficients of dependent and independent variables

	Variables	Mean	SD	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Total Revenue (92)	100755	400606	.400	.206	.106	.898	.836	.840	.883	.577	.815	.592	.043	.365	.534	.037	.742	.676
2.	Total Profit (92)	3094	48473		.135	.304	.370	.157	.096	.227	.083	.205	.291	.054	.212	.500	−.003	−.068	.105
3.	Revenue/employee (SPE) (92)	52.2	107			.400	.169	.021	.054	.128	.510	.066	.182	.196	.078	.120	−.128	.049	−.030
4.	Profit/asset (ROA) (92)	.0307	.114				.061	−.002	.002	.018	−.065	−.015	.119	.127	.066	.108	−.068	−.010	−.055
5.	Outsourcing (91)	50761	154					.715	.663	.842	.571	.754	.583	.038	.417	.491	.039	.622	.637
6.	Reward-Welfare Funds (91)	2200	10055						.849	.794	.501	.766	.457	.008	.184	.516	.061	.833	.802
7.	Depreciation Funds (91)	11375	72760							.754	.525	.813	.430	.021	.198	.319	.038	.890	.670
8.	Reserve Funds (91)	13230	45455								.600	.784	.580	.044	.305	.476	.056	.723	.683
9.	Inventory Funds (91)	7301	13360									.584	.437	.063	.320	.250	.040	.494	.503
10.	Borrowing Capacity (91)	47553	168604										.463	.042	.282	.376	.059	.777	.676
11.	Marketing Intensity (91)	1902	6599											.065	.339	.322	−.003	.353	.441
12.	R&D Personnel (91)	.067	.0472												.092	.045	.083	.022	−.046
13.	R&D Funds (91)	213	1331													.135	.032	.159	.222
14.	Retained Earnings (91)	1311	14487														.012	.298	.321
15.	Ownership (91)	.833	.3726															.044	.095
16.	Fixed Capital (91)	57345	341036																.664
17.	Total Employees (91)	2307	6100																

Notes: $N = 12{,}047$. *Coefficients* with absolute value of 0.017 or greater are significant at 0.05 level; coefficients with absolute value of 0.024 or greater are significant at 0.01 level. *Variable definitions:* For variables with clear meaning, we do not give further definitions. The following variables need detailed definitions: (5) outsourcing includes three expenditures on purchasing material and energy; (6) reward-welfare funds include workers welfare fund, welfare and bonus funds drawn from special funds; (7) depreciation funds include four funds: depreciation reserve, major repair reserve, depreciation funds drawn in current year, and major repair funds drawn in current year; (10) borrowing capacity = total debts; (11) marketing intensity = total marketing and sales expenditure; (12) R&D personnel = (number of technical staff/total workforce); (15) ownership = 1 if state-owned, otherwise = 0. (91) = data in 1991; (92) = data in 1992.

TABLE 2 Factor analysis of independent variables

Variables*	Factor 1: Firm Resources	Factor 2: R&D Capabilities
Outsourcing (91)	.856	.264
Reward-Welfare Funds (91)	.912	–.043
Depreciation Funds (91)	.877	–.018
Reserve Funds (91)	.908	.160
Inventory Funds (91)	.646	.311
Bank Loan (91)	.882	.098
Marketing Expenditure (91)	.584	.399
R&D Personnel (91)	–.095	.675
R&D Funds (91)	.247	.716
Retained Earnings (91)	.561	.023
Variance Explained by Each Factor	5.08	1.33
Final Communality Estimates		Total = 6.41

Notes: * See table 1 for definitions.

TABLE 3 Regression results (standardized coefficients)

(1)	(2)	(3)	*t*-statistic					
			(4)	(5)	(6)	(7)	(8)	(9)
Model 1: Total revenue	.900	.0001	** (42.0)	1.037** (175)	.173** (60.0)	–.004 (–1.33)	–.047** (–9.16)	–.088** (–19.5)
Model 2: Total profit	.342	.0001	** (14.6)	1.070** (70.3)	.146** (19.6)	–.002 (–.238)	–.838** (–63.7)	–.159** (–13.8)
Model 3: Revenue/employee	.086	.0001	** (39.3)	.233** (13.0)	.218** (24.9)	–.130** (–14.8)	.010 (.619)	–.207** (–15.2)
Model 4: Profit/Asset	.031	.0001	** (21.2)	.115** (6.24)	.139** (15.4)	–.067** (–7.45)	–.005 (–.326)	–.137** (–9.72)

Notes: Column headings as follows: (1) dependent variables; (2) R^2; (3) prob. > F; (4) Intercept; (5) factor 1; (6) factor 2; (7) ownership; (8) fixed capital; (9) workforce. $N = 12{,}046$; ** $p < 0.01$, * $p < 0.05$.

While all four regressions are highly significant, their goodness of fit is different. The regressions of total revenue and total profit achieved high *R*-squares: 90% and 34.2%, respectively. The regressions of standardized measures – revenue per employee and profit per asset – have lower *R*-squares, 8.6% and 3.1%, respectively. The explanatory powers of the two revenue regressions are substantially greater (90% and 8.6%) than those of the two profit regressions (34.2% and 3.1%). This pattern of difference suggests that the relationship between firm resources and capabilities and

firm revenue is stronger than the relationship between firm resources and capabilities and firm profit.

Outsourcing, which measures the level of vertical integration, received mild support. Among four regression models, positive associations were found in two tests. For the three special funds tested, results were mixed. From the organizational theory perspective, these funds are similar to those of slack resources. Some slack can act as an inducement, which represents 'payments to members of the coalition in excess of what is required to maintain the organization' (Cyert and March 1963, 36). Other types may be employed as a technical buffer, which 'reduces the amount of information that must be processed during task execution and prevents the overloading of hierarchical channels' (Galbraith 1973, 15). Nevertheless, these funds are earmarked for certain specific purposes, and deviation from accounting rules can lead to disciplinary actions from the government. Therefore the managerial discretion is limited. Ultimately, misuse of these funds can jeopardize other activities supposed to be funded by these resources. More studies are needed to reach conclusive results.

Reserve funds also received mixed results. It had a positive impact on revenue but negative impact on profit. Inventory funds, which represent resources tied up in mostly unsold products, had a positive impact on total revenue, but exhibited negative relationships with the other three measures of performance. Keeping a certain level of inventory helps the firm to meet fluctuating market demand. In many of the cases we studied, Chinese companies deliberately maintain some inventory much the way of stockpiling slack resources (Singh 1986), which may have a 'production smoothing' effect.

However, during our study, we learned that excessive inventory was often the result of unsold products. This in fact is a major problem with those firms that have been used to selling whatever they produce to the state (as opposed to produce which the market demands) are still incapable of dealing with the market directly. They isolate themselves from the market and often produce products that they cannot sell. This type of inventory is slack resource that has already been utilized and cannot be used for other strategic purposes, and therefore is more likely to have a negative impact on performance.

Borrowing capacity was found to have a positive impact on performance. Among the four measures, we found positive relationship in two tests, while in the other two tests, its impact was not significant.

Marketing intensity, R&D capacity, and retained earnings showed the strongest and most consistent results. Marketing intensity had significant positive associations with all the four measures of firm performance. R&D capacity, which was measured by the percentage of scientists and engineers specializing in research and development, also had strong positive associations with profit, profitability ratio, and revenue growth, and its positive contribution to total revenue almost reached the traditionally accepted significant level. Finally, retained earnings also had a consistent relationship with all performance measures.

We also examined the impact of several control variables. First, we found that firm age was negatively related to revenue and revenue growth. Overall firm age was associated with inertia and became a liability for sustained growth in an increasingly competitive environment. During our research we learned that some of the oldest firms included in our study were founded several hundreds years ago, such as pharmaceutical companies specializing in traditional Chinese herbal medicine, and were known for their national reputation and trade secrets. In recent years, they have faced stiff competition from foreign companies armed with deep pockets and more technologies, and their unique trade secrets have become the subject of imitation. The traditional competencies were losing ground. On the other hand, our data did not include those intangible resources such as trade secrets. Further research is needed to draw definitive conclusions.

Secondly, we found evidence that firm ownership types had significant performance implications. Privately owned and foreign-owned enterprises had competitive advantage over firms under state ownership and control. These results are consistent with previous studies that have examined the Chinese SOEs (e. g., Tan and Listchert 1994), and validated results on ownership and performance from empirical studies using survey methods (e. g., Luo, Shenkar, and Tan 1998; Luo and Tan 1998).

Finally, we examined the percentage of fixed capital on production, which in the Chinese context, measures the level of concentration on core business. Results were inconsistent. Specifically, this ratio had a positive impact on two performance measures, i. e., total revenue and profitability, but had a negative impact on revenue growth.

In sum, the results generally suggest that certain firm resources and capabilities have significant performance implications. Among them, marketing intensity, R&D capacity, and retained earnings had consistent positive impact on nearly all major performance indicators.

Implications and Conclusions

The impact of firm resources and capabilities on performance among Chinese enterprises has been a subject of anecdotal speculation due to its significant implications for organizational researchers as well as practitioners. Yet empirical evidence has been very limited. Motivated by a deep curiosity in, using the language of Williamson (1996), 'what is going on there' behind the 'bamboo curtain', and underpinned by a strong conviction that organizational researchers have much to gain as well as to offer by focusing on transitional economies, we use large archive data in this study to examine the impact of firm resources and capabilities on performance. Results indicate that most of the firm specific resources and capabilities examined in this study have a positive impact on performance.

A closer examination of these resources and capabilities indicates that most of them have been considered as slack in Western literature. Therefore, our study lends support to organizational theory literature, which has established a positive relationship between slack resources and firm performance. On the other hand, in the context of Chinese transitional economy, firms have been known to maintain a large inventory of organizational slack, and their lackluster performance has often been attributed to their inefficiency represented by slack (Aharoni 1986; Kornai 1992). Despite the lack of empirical evidence to support this proposition, there has been little hesitation for Western advisors to recommend that slack be eliminated. As a result, the 'evil' of slack in SOEs in transitional economies has become a part of the well-accepted but rarely tested conventional wisdom (Tan and Peng 2003). Thus, our study also has the benefit of empirically examining a previously untested link between organizational capabilities and firm performance in a transitional economy. Such insight has profound implications for research and practice because developing capabilities constitutes one of the most SOE strategies during the economic transition (Tan and Tan 2005).

Taking the preliminary results reported here as a point of departure, we suggest that future research expand the resource based view and take a 'dynamic' approach in examining firm resources and capabilities. Teece and colleagues (1997) saw dynamic capabilities as a separate strategic paradigm from the resource based view, specifically oriented to an environment of rapid change and innovation-based competition. 'Dynamic' connotes the capacity to renew resources in response to market changes

and 'capabilities' connotes processes for adapting, integrating, and reconfiguring inimitable resources to keep pace with a changing business environment (Teece et al. 1997, 515). Such future effort can potentially reveal how resources are reconfigured over time in firm-specific processes that are dependent upon initial assets and environmental dynamism (Eisenhardt and Martin 2000; Teece et al. 1997).

The implications for policymakers in transitional economies are that underutilized resources may not necessarily be an 'evil' associated with the inefficiency of SOEs. In a turbulent environment, slack helps buffer the firm from the assault from unpredicted directions, thus ensuring a certain level of performance. Moreover, possession of some slack enables managers to take on more risky and innovative projects that may pay off in the long run. In this sense, slack resources can be sources of competitive advantage. For SOE managers, our findings help support a long-held belief that having some slack is not only necessary, but also beneficial to the firm. As D'Aveni (1994) and Porter (1985) pointed out, firms with substantial slack are able to adapt to unanticipated situations and fight back.

While these implications may not be novel to policymakers and SOE managers familiar with the workings of transitional economies, the implications for foreign investors can be profound. An increasing number of foreign investors have entered transitional economies such as China in search of joint venture partners and market opportunities (Yan and Gray 1994). SOEs are usually the top candidates as joint venture partners, who tend to avoid SOEs with a seemingly excessive amount of slack. Moreover, even when teaming up with these SOEs, foreign investors typically like to slice the SOEs, and form joint ventures only with the relatively 'efficient' part that does not have much slack. However, such a strategy may backfire in a highly turbulent environment during the transition.

In sum, the resources-based view of the firm advances our understanding not only by identifying what the resources and capabilities are, but also how these resources and capabilities are utilized to build competitive advantage and improved firm performance. Therefore, for foreign investors looking for joint venture partners in transitional economies, our findings suggest a departure from the widely accepted conventional wisdom. Specifically, they should study potential partners more carefully. While absorbed slack such as excess capacity may be undesirable, unabsorbed slack such as discretionary fund may be highly attractive. Instead of just focusing on reported levels of efficiency and perfor-

mance, foreign investors should also attempt to evaluate their prospective partners' resources not reflected in revealed capacities, because such unreported slack may be indicative of a better potential. Our preliminary, with its limitations notwithstanding, offers a ground for future exploration and falsification.

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