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Organizational slack and firm performance during institutional transitions

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Abstract The conflicting views about the impact of organizational slack on firm performance call for more powerful theoretic lens to explore this link. This study finds that institutional theory is insightful to add a deeper and finer-grained understanding on what is behind the relationship between organizational slack and firm performance during institutional transitions. As a replication with extension of the research of Tan and Peng (*Strategic Management Journal*, 24: 1249–1263, 2003), this study not only replicates the impact of organizational slack on firm performance in a broader and more recent context, but also extends previous work by advocating and enriching the impact of institutional transitions on this link. Using a large sample of Chinese listed firms, we find that unabsorbed slack is critical for firms to sustain their competitive advantages. Further, such a positive impact is especially likely to be profound for firms confronting resource scarcity and environmental dynamism caused by institutional transitions.

Keywords Organizational slack · Firm performance · Institutional transitions

Does organizational slack contribute to or inhibit firm performance? This is probably one of the most important but inconclusive questions in strategic management research and practice (George, 2005; Tan & Peng, 2003). Existing literature usually adopts the resource-based view and organizational inertia perspective to study the

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slack–performance link. The resource-based view suggests that organizational slack can be used to support innovations, facilitate strategic behaviors, and thus enhance firm performance (Cheng & Kesner, 1997; Nohria & Gulati, 1996). Some empirical research has supported this idea (Singh, 1986). However, the organizational inertia perspective argues that organizational slack will lead to organizational inertia which may hurt firm performance (Leonard-Barton, 1992). This standpoint also has been supported by researchers such as Davis and Stout (1992). Recently, some scholars argue there may be a more complex effect of organizational slack on firm performance (Tan & Peng, 2003).

All these findings provide valuable knowledge about the slack–performance link. However, two research gaps remain. First, existing studies generally take place in developed economies. As research horizon is now increasingly expanded to transition economies such as China (Peng, 2003; Quer, Claver, & Rienda, 2007; Wright, Filatotchev, Hoskisson, & Peng, 2005), it is unclear whether the same roles of organizational slack apply to firm performance in the new settings. Tan and Peng (2003) have notified this problem earlier and conducted an excellent study based on the data of Chinese state-owned enterprises (SOEs) in 1991–1992. However, in the last 15 years since Tan and Peng (2003) collected their data, the Chinese economy has gone through numerous institutional transitions—defined as the "fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players" (Peng, 2003: 275). Given the changes and the diversity in the economy, it is necessary to replicate the research of Tan and Peng (2003) in a broader context using more recent data. Second, existing research based on the resource-based view, organizational inertia perspective, and other theories has produced conflicting findings on the slack–performance link. These conflicting findings necessitate further investigation. Institutional theory suggests that the institutional environment firms confront would influence firms' strategic behaviors such as how to use organizational slack (Peng, 2003; Peng & Heath, 1996), and would even affect the value of organizational slack (Guillen, 2000; Wright et al., 2005). Therefore, institutional theory may be insightful to probe deeper into the impact of organizational slack on firm performance. Past literature has highlighted the firms in transition economies are constrained by an institutional environment with low munificence and high dynamism (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998; Makino, Lau, & Yeh, 2002; Peng, 2003). Thus, the institutional environment of transition economies has two significant characteristics: munificence and dynamism (Peng, Zhang, & Li, 2007). These two characters may play critical roles on the slack–performance link, hence, how they influence this link becomes a critical and interesting research question.

The purpose of this article, therefore, is to deepen our understanding of the relationship between organizational slack and firm performance during institutional transitions. First, we replicate the research of Tan and Peng (2003) by using data collected from a more diverse and more recent sample. Although replications are generally argued to be important in scientific research, there is a lack of replications in management literature (Peng et al., 2007; Tsang & Kwan, 1999). Yet, replications serve as the fundamental role of protecting against the uncritical acceptance of empirical results (Peng, Zhou, & York, 2006). Second, by identifying munificence and dynamism as two important characters of institutional environment, we test how

institutional factors influence the slack–performance link, which can be positioned as an extension of Tan and Peng (2003). Third, empirically, as the largest transition economy, China provides a highly interesting setting to refine and test existing management theories (Li & Peng, 2008; Peng, Tan, & Tong, 2004), and we need to know more about "what is going on there" (Meyer, 2006; Quer et al., 2007). Insights in this also have important application value as they may inform mangers on the conditions to enhance the effectiveness of organizational slack. Finally, the Chinese experience may help shed light on other transition economies (Peng, 2000).

Hypotheses

As potentially utilizable resources that can be diverted or redeployed to achieve the firm's goals (George, 2005), organizational slack can be broadly divided into (1) absorbed slack which is not easy to redeploy and (2) unabsorbed slack which is more easily redeployed (Singh, 1986). Unabsorbed slack can be deployed more easily to adapt to the environment change, whereas the role played by absorbed slack pales because of the high asset specialization (Nohria & Gulati, 1996). Therefore, unabsorbed slack has more influence on firm performance in an uncertain environment (George, 2005). Firms operating in transition economies confront a high level of environmental uncertainty (Li, Sun, & Liu, 2006; Meyer, Estrin, Bhaumik, & Peng, 2008; Peng et al., 2004). Thus, the impact of unabsorbed slack on firm performance is more critical than that of absorbed slack in transition economies (Tan & Peng, 2003). As a result, following Nohria and Gulati (1996), this paper focuses on *unabsorbed* slack.

Regarding the effect of organizational slack on firm performance, there has been an extensive debate in both academic and practitioner forums. Based on the resource-based view, proponents of the positive slack–performance link suggest that organizational slack can contribute to competitive advantage by performing as the "payments to members of the coalition in excess of what is required to maintain the organization" (Cyert & March, 1963: 36), relaxing the internal boundaries and supporting innovations (Nohria & Gulati, 1996), and helping its possessors respond better to the environmental changes (Bromiley, 1991; Cheng & Kesner, 1997). In contrast, the opponents argue that organizational slack may lead to organizational inertia (Leonard-Barton, 1992). "Resource-rich organizations are less likely to experience a sense of urgency regarding adaptation and more likely to perceive an increased (perhaps false) sense of certainty about the future" (Kraatz & Zajac, 2001: 634). The firm with more slack would be unwilling to develop and learn new knowledge to renew its existing capabilities (Leonard-Barton, 1992). This would make it difficult for a resource-rich firm to find a fit with the environmental changes, and further lower performance. Additionally, organizational slack may become a source of agency problems which breed inefficiency (Jensen & Meckling, 1976). Therefore, the opponents suggest a negative impact of organizational slack on firm performance.

In transition economies, we argue that there is a *positive* correlation between unabsorbed slack and firm performance for four reasons. First, most firms in transition economies are facing one of the most uncertain markets in the world (Li

et al., 2006; Peng, 2003). To grasp new market opportunities and sustain their competitive advantages, they have to develop new products (Li & Atuahene-Gima, 2001). Because unabsorbed slack can support innovations, it may enhance firm performance (Nohria & Gulati, 1996). Second, strategic change is a critical antecedent to the survival and success of firms in high-velocity environments (Kraatz and Zajac, 2001). Firms operating in transition economies need to change their strategies to adapt to the environmental changes (Li & Peng, 2008). Unabsorbed slack can support strategic behaviors to create a dynamic fit with the environment, and further enhance their performance (Cheng & Kesner, 1997). Third, due to the weak financial market infrastructure, it is often difficult for firms in transition economies to gain resources in the market (Khanna & Palepu, 2000). Thus, unabsorbed slack is likely to be valuable, unique, and hard-to-imitate resources that have strong performance implications. Finally, organizational slack, especially unabsorbed slack, of most firms in transition economies is at a low level. Thus, the adverse effect of slack may be less distinct in this context. In addition, the empirical research of Tan and Peng (2003) also finds a positive impact of unabsorbed slack on firm performance in China. Thus:

Hypothesis 1 Unabsorbed slack is positively related to firm performance during institutional transitions.

Influence of institutional transitions on the slack–performance link

Institutional theory suggests that firm strategy and performance are, to a large degree, determined by the institutions which are known as the "rules of the game" (Peng & Heath, 1996; Peng, Wang, & Jiang, 2008). Firms rationally pursue their interests and make strategic choices within institutional constraints (Peng, 2003; Peng et al., 2008). The institutional environment firms face would exert significant influence on the value of internal resources, firms' strategic behaviors, and subsequent performance (Guillen, 2000; Peng, 2003; Peng & Heath, 1996; Wright et al., 2005). For the slack–performance link, the influence of institutional environment could be manifested in two aspects: (1) whether the institutional environment enables the firm to obtain external resource easily; (2) whether the institutional environment helps the focal firm decrease environmental uncertainty. Thus, the influence of institutional environment on this link would be concluded into two aspects: munificence and dynamism (La Porta et al., 1998; Makino et al., 2002; Peng, 2003; Peng et al., 2007).

The economic reforms in China have been aiming to improve productivity and efficiency of the economy by moving from central planning to market competition. However, China is a large and unevenly developed country, and the institutional transitions of different parts in China are not at the same level. The market-supporting institutions of certain regions are more developed, and the market systems in those regions function better (Peng et al., 2007). The integrated institutions help those regions attract a significant number of investors, who not only bring significant capital, but also substantial managerial, technological, and governance resources (Luo & Peng, 1999; Zhou, Delios, & Yang, 2002). Thus, the firms in those regions can acquire resources externally more easily. However, not all

firms in all regions experience the same degree of environmental munificence (Peng et al., 2007). In some regions, institutional transitions are slow, and the market systems are dysfunctional. As a result, it is often difficult for the firms there to gain resources externally (Mathews, 2002). Therefore, the diversity in the degree of institutional transitions causes Chinese firms facing different environmental munificence.

Additionally, China's institutional transitions have changed the market environment dramatically. Market competition has grown from nonexistent to increasingly intense (Tan & Peng, 2003). What is more important is that compared with firms in developed market, most firms in transition economies such as China are distinctive in terms of operating in a more uncertain environment (Peng & Heath, 1996; Peng et al., 2004). Institutional transitions have changed the formal and informal "rules of the game" fundamentally and comprehensively (Peng, 2003). Thus, while firms in developed economies do experience some environmental dynamism (Boyd, 1995; Dess & Beard, 1984), the scale and scope of such dynamism pale in comparison with the institutional transitions experienced by firms in China (Peng, 2000, 2003; Wright et al., 2005). Although a great part of Chinese firms are facing a highly uncertain environment, there are also parts of China where firms experience a relatively low level of environmental dynamism (Peng et al., 2007). Chinese government still protects certain firms, and often gives strong institutional supports for these firms to lower the environmental uncertainty (Peng et al., 2008). In addition, the institutions faced by some firms are rarely changed, whereas those faced by some firms are often suddenly changed. For instance, during 2006 and 2007, several policies were announced to slow the increase of housing prices. These policies significantly increase the environmental dynamism faced by related firms, such as those in construction and property development industries.

As described herein, the institutional transitions in China lead to the contextual diversities in environmental munificence and dynamism faced by different firms (La Porta et al., 1998; Makino et al., 2002; Peng, 2003). Thus, munificence and dynamism are two significant characters to reflect the difference of firms' institutional environment (Peng et al., 2007). These two characters may play critical roles on the slack–performance link. Next, we will probe deeper into the conditions under which organizational slack may (or may not) enhance performance to find out the influence of institutional transitions on the relationship between organizational slack and firm performance. A model in Figure 1 is developed to argue that the effectiveness or ineffectiveness of organizational slack depends on the perceived environmental munificence and dynamism.

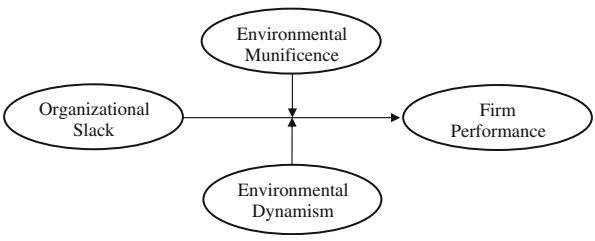

Figure 1 Conceptual model

One of the most crucial managerial tasks is preserving and securing resources to facilitate growth or prevent decline (Greening & Gray, 1994). Some environments which offer more abundant resources are known as munificence (Dess & Beard, 1984). In a high munificence environment, even if the firm does not hold enough organizational slack to support its innovation and/or strategic change, it can obtain the required resources easily. In contrast, in a low munificence environment, it is difficult for the firm to acquire any resources outside the firm (Boyd, 1995). The only way for the firm to obtain resources is internal accumulation (Dess & Beard, 1984). However, the internal accumulation needs more time, which will inhibit the firm's first-mover advantages (Lieberman & Montgomery, 1988). Thus, slack becomes valuable, unique, and hard-to-imitate resources; and the performance implications of organizational slack in a low munificence environment would be higher than that in a high munificence environment. Therefore:

Hypothesis 2 The positive relationship between slack and firm performance is weaker in a high munificence environment than that in a low munificence environment.

As the rate of change and the degree of instability of factors within an environment, dynamism measures environmental volatility (Dess & Beard, 1984). Increasing levels of environmental dynamism will lead to greater environmental uncertainty (Boyd, 1995). In a high dynamism environment, the competition situation will suddenly change, and the life of a product becomes shorter (Dess & Beard, 1984). Thus, firms must respond to these changes rapidly to fit the environmental changes, and achieve the success of innovation as quickly as they can to grasp new market opportunities (Lieberman & Montgomery, 1988). Organizational slack can support strategic change. The more organizational slack, the better the firm can cope with the uncertain factors within a short time (Bromiley, 1991). Furthermore, slack can support innovation (Nohria & Gulati, 1996). During the process of innovation, the speed of innovation can quicken by providing more resources (Kessler & Bierly, 2002). With more organizational slack, the firm can provide more resources for innovation, and achieve the success of innovation quicker which is helpful to obtain the first-mover advantage (Lieberman & Montgomer, 1998). Thus, organizational slack plays a critical role on the firm to quickly adapt to the environmental dynamism. Whereas, in the low dynamism environment, despite organizational slack can enhance firm performance, there is more time left for the firm to adapt to the environmental change, and the contributions of organizational slack on enhancing the speed of strategic change and innovation will be not as significant as those in the high dynamism environment. Therefore, the value of organizational slack in a high dynamism environment would be higher than that in a low dynamism environment.

Hypothesis 3 The positive relationship between slack and firm performance is stronger in a high dynamism environment than that in a low dynamism environment.

Methodology

Sample

Archival data on listed firms, such as those used by Peng (2004), are more accessible and external than case or survey data typically used in many previous China studies. Thus, our sample is composed of publicly held firms drawn from the China Stock Market Accounting Database (CSMAR) which is one of the most famous databases in China. This database contains the information of firms whose stock is traded on the Shanghai or Shenzhen stock exchanges. All the data used by this study are publicized in their annual reports of 2004 and 2005. Firms in financial industry may have special capital structure such as leverage ratio which could have influences on the validity of the measure of organizational slack. Thus, firms in financial industry are removed for our sample. All the remaining firms that can obtain the full date are collected into our sample, and the final amount is 967.

Variables

This paper focuses on unabsorbed slack. Based on the previous literature (e.g., Bromiley, 1991; Cheng & Kesner, 1997; George, 2005; Tan & Peng, 2003), unabsorbed slack is measured by (current asset−current liabilities)/assets and debt/assets (inversed). Current asset is the most easily deployed resource and provides managers the greatest degree of freedom in allocating it to alternate uses (Cheng & Kesner, 1997; George, 2005). The difference between current asset and current liabilities reflects the net current asset can be allocated to alternate use. We divide it by assets to eliminate the influence of firm size. A firm with a high debt/assets ratio has a relatively low ability to obtain additional funds through incurring debt, thus, the freedoms to reallocate resources or raise additional debt to meet expedient needs become restricted (Bromiley, 1991; George, 2005). Therefore, debt/assets (inversed) is also used to measure unabsorbed slack.

Following Bromiley (1991) and Zhang (2006), firm performance is operationalized as return on assets (ROA). It is also noteworthy that there is *a time lag* of the influence of organizational slack on firm performance (Bromiley, 1991), therefore, organizational slack is measured by the date of 2004 and the others by the date of 2005 (Tan & Peng, 2003).

Certain regions such as coastal provinces and municipalities in China attract a significant number of investors, and these investors bring not only significant capital, but also substantial managerial, technological, and governance resources (Luo & Peng, 1999; Zhou et al., 2002). Therefore, coastal provinces and municipalities are regarded as a high munificence environment (Peng et al., 2007; Zhou et al., 2002). Following Peng et al. (2007), munificence is measured by headquarters' location of the firm. The coastal provinces and municipalities are Beijing, Shanghai, Tianjin, Liaoning, Hebei, Shandong, Jiangsu, Zhejiang, Fujian, Guangdong, and Hainan. Conversely, non-coastal regions are regarded as low munificence environment (Peng et al., 2007). Consequently, firms are divided into two groups based on whether their headquarters are in high munificence environ-

ments. Overall, 569 observations are from high munificence regions, and 398 observations are from low munificence regions.

Environmental dynamism is operationalized by a standardized measure of the volatility of sales growth rate over 5 years (Boyd, 1995; Peng et al., 2007). Then, we follow Boyd (1995) and Peng et al. (2007) to split the sample into two groups (high dynamism versus low dynamism) based on the sample means. Consequently, 348 firms confront environments with a high level (above average) and 619 firms with a low level (below average) of dynamism, respectively.

It has been well known that firm size, age, and industry all influence firm performance (Peng et al., 2007; Tan & Peng, 2003). Thus, firm size (logarithm of employee number), age, and industry are taken as control variables. Industries are broadly controlled using dummy variables to indicate whether a firm belongs to one of the five main industry groups classified by the Chinese stock exchanges, namely, manufacturing, conglomerate, distribution, real estate/properties, and public utilities (Peng et al., 2007).

Because of liquidity difficulties of legal person shares and state shares, only individual shares can freely trade in China's stock market. Such institutional categories create serious principal–principal conflicts and agency problem after IPO in China (Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Due to the principal–principal conflicts and agency problem, some scholars find that Chinese firms which have longer years after IPO have a worse performance (Fan, Wong, & Zhang, 2007). Thus, Post-IPO years is another control variable in this study.

Results

The descriptive statistics are in Tables 1 and 2. The standardized regression model is used to test Hypothesis1. The results are in Table 3. Model 2 of Table 3 presents the result for Hypothesis 1. There is a significant positive relationship between unabsorbed slack and firm performance (β=0.123, p<0.001), which supports Hypothesis 1. Meanwhile, whether there is a curvilinear relationship between slack and firm performance is also tested, the result dose not support the curvilinear link (β=−0.003, p>0.1).

Table 1 Descriptive statistics and correlation matrix of full sample (N=967).

	Means	St. D.	Size	Age	Post-IPO years	Munificence	Dynamism	Slack
Size	7.360	1.385						
Age	12.870	3.579	−0.127[b]					
Post-IPO years	10.232	2.616	−0.106[b]	0.638[b]				
Munificence	0.588	0.492	−0.078[a]	0.114[b]	0.210[b]			
Dynamism	0.726	0.734	0.400[b]	−0.044	0.001	0.134[b]		
Slack	0.288	0.169	−0.161[b]	−0.146[b]	−0.112[b]	0.086[b]	−0.099[b]	
Performance	0.025	0.070	0.144[b]	−0.108[b]	−0.061	0.058	0.185[b]	0.272[b]

Industry is omitted to save space.
[a] Significant at 5%
[b] Significant at 1%

Table 2 Descriptive statistics and correlation matrix of sub-samples.

	Means	St. D.	Size	Age	Post-IPO years	Slack	Means	St. D.	Size	Age	Post-IPO years	Slack
	Low munificence (N=398)						High munificence (N=569)					
Size	7.490	1.228					7.270	1.480				
Age	12.380	3.494	−0.152[b]				13.211	3.601	−0.101[b]			
Post-IPO years	9.575	2.211	0.013	0.573[b]			10.691	2.776	−0.140[b]	0.669[b]		
Slack	0.270	0.167	−0.080	−0.178[b]	−0.205[b]		0.300	0.170	−0.198[b]	−0.143[b]	−0.096[a]	
Performance	0.020	0.073	0.191[b]	−0.109[b]	−0.098	0.316[b]	0.028	0.068	0.125[b]	−0.121[b]	−0.063	0.234[b]
	Low dynamism (N=619)						High dynamism (N=348)					
Size	7.039	1.275					7.932	1.392				
Age	12.950	3.523	−0.188[b]				12.727	3.677	−0.023			
Post-IPO years	10.236	2.664	−0.189[b]	0.654[b]			10.224	2.532	0.024	0.613[b]		
Slack	0.298	0.182	−0.138[b]	−0.135[b]	−0.113[b]		0.268	0.142	−0.152[b]	−0.183[b]	−0.113[b]	
Performance	0.019	0.071	0.096[a]	−0.129[b]	−0.098[a]	0.281[b]	0.035	0.067	0.151[b]	−0.063	0.012	0.296[b]

Industry is omitted to save space.
[a] Significant at 5%
[b] Significant at 1%

Table 3 Results of regression analysis (N=967).

	Model 1	Model 2	Model 3
Constant	−0.020	−0.062[c]	−0.088[d]
Size	0.008[d]	0.011[d]	0.011[d]
Age	−0.002[b]	−0.001[a]	−0.001[a]
Post-IPO years	0.001	0.001	0.001
Slack		0.123[d]	0.127[d]
Slack × slack			−0.003
R^2	0.051	0.131	0.134
Adjusted R^2	0.044	0.124	0.125
F value	7.311[d]	18.080[d]	16.368[d]

Industry is omitted to save space.
[a] Significant at 10%
[b] Significant at 5%
[c] Significant at 1%
[d] Significant at 1‰

There are two most common analytical tools for testing the moderating effect: moderated regression analysis and comparison of correlations across subgroups (Boyd, 1995). When hypothesizing a moderator affecting the strength of a relationship, subgroup analysis should be used, while studies hypothesizing a moderator affecting the form of a relationship should use moderated regression (Arnold, 1982; Boyd, 1995). Because this study hypothesizes that the strength of the slack–performance relationship varies under the conditions with different environmental munificence and dynamism, subgroup analysis is more appropriate to test hypotheses. As suggested by Arnold (1982), we first do subgroup regression analysis to estimates correlations across two different populations, and then compute a Z-statistic to determine whether the effect varies significantly across group. The results of Hypotheses 2 and Hypotheses 3 are in Tables 4 and 5. Table 4 reports that

Table 4 Comparison of correlations in the low and high munificence environments.

	Low munificence (N=398)		High munificence (N=569)		Z[a]
	Model 1	Model 2	Model 1	Model 2	
Constant	−0.038	−0.110[e]	−0.012	−0.041[b]	
Size	0.012[e]	0.014[e]	0.007[e]	0.010[e]	
Age	−0.001	0.000	−0.003[c]	−0.002[b]	
Post-IPO years	−0.002	−0.001	0.001	0.001	
Slack		0.138[e]		0.103[e]	1.892[c]
R^2	0.080	0.167	0.061	0.122	
Adjusted R^2	0.063	0.149	0.049	0.110	
F value	4.812[e]	9.692[e]	5.179[e]	9.755[e]	

Industry is omitted to save space.
[a] One-tailed tests
[b] Significant at 10%
[c] Significant at 5%
[d] Significant at 1%
[e] Significant at 1‰

Table 5 Comparison of correlations in the low and high dynamism environments.

	Low dynamism (N=619)		High dynamism (N=348)		Z^a
	Model 1	Model 2	Model 1	Model 2	
Constant	−0.001	−0.031	−0.024	−0.101[e]	
Size	0.006[d]	0.009[e]	0.008[d]	0.010[e]	
Age	−0.002[c]	−0.001	−0.002	−0.001	
Post-IPO years	0.000	0.000	0.002	0.002	
Slack		0.110[e]		0.156[e]	2.473[d]
R^2	0.060	0.133	0.037	0.137	
Adjusted R^2	0.049	0.121	0.017	0.116	
F value	5.581[e]	11.648[e]	1.863[b]	6.719[e]	

Industry is omitted to save space.
[a] One-tailed tests
[b] Significant at 10%
[c] Significant at 5%
[d] Significant at 1%
[e] Significant at 1‰

organizational slack and firm performance have a correlation of 0.138 in low munificence environment, and 0.103 in high munificence environment. Z-statistics indicate that this difference is significant (Z=1.892, p<0.05) which support Hypothesis 2. Likewise, Table 5 reports that the correlation between organizational slack and firm performance is 0.156 in high dynamism environment, and 0.110 in low dynamism environment. The Z-statistics is 2.473 (p<0.01), and Hypothesis 3 is supported. Figures 2 and 3 show the differences of the slack–performance relationships in low and high munificence environment and dynamism environment.

For the purpose of comparison, a supplemental regression model is also used. We mean-centered all the variables to minimize the threat of multicollinearity in equations where we include interaction terms (Aiken & West, 1991). The values of the variance inflation factor (VIF) are well below the cut-off of 10 recommended by

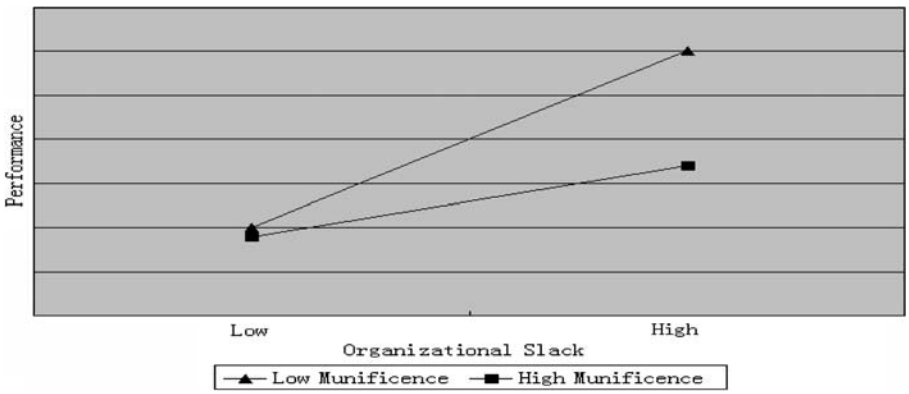

Figure 2 Relationships between organizational slack and performance in the low and high munificence environments

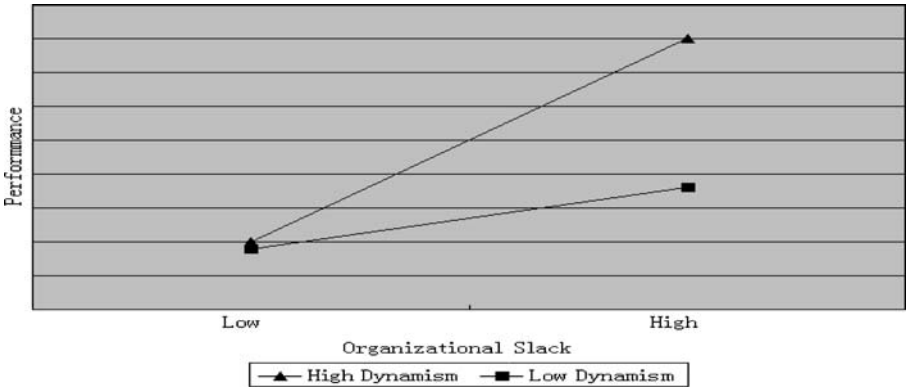

Figure 3 Relationships between organizational slack and performance in the low and high dynamism environments

Neter et al. (1985). The regression result is in Table 6. As can be seen, the slack–performance link is negatively moderated by environmental munificence (β=−0.005, p<0.1), and positively moderated by environmental dynamism (β=0.009, p<0.01). Hypothesis 2 and Hypothesis 3 both are supported.

Discussion

Contributions

As a replication with extension of the research of Tan and Peng (2003), this study adds to prior studies that have explored the impact of organizational slack on firm

Table 6 Results of moderated regression analysis (N=967).

	Model 1	Model 2	Model 3
Constant	−0.020	−0.062[c]	−0.081[d]
Size	0.008[d]	0.011[d]	0.008[d]
Age	−0.002[b]	−0.001[a]	−0.001
Post-IPO years	0.001	0.001	0.000
Slack		0.123[d]	0.133[d]
Munificence			0.002
Dynamism			0.015[d]
Slack × munificence			−0.005[a]
Slack × dynamism			0.009[c]
R^2	0.051	0.131	0.164
Adjusted R^2	0.044	0.124	0.154
F value	7.311[d]	18.080[d]	15.588[d]

Industry is omitted to save space.
[a] Significant at 10%
[b] Significant at 5%
[c] Significant at 1%
[d] Significant at 1‰

performance in several ways. First, despite the importance of the influence of organizational slack on firm performance, most existing studies are limited to developed markets with relatively stable institutional environment, yet little is known about that in transition economies that experience significant institutional changes (Tan & Peng, 2003). Although Tan and Peng (2003) have tested the slack–performance link based on the data of Chinese SOEs in 1991–1992, there are significant differences between different types of firms, and firms have experienced numerous institutional transitions (Peng et al., 2004). It is necessary to test the impact of organizational slack on firm performance in a more general and recent context. Because the impact of unabsorbed slack on firm performance is more critical than that of absorbed slack in transition economies (Tan & Peng, 2003), this paper focuses on the performance implication of unabsorbed slack. Based on the data of publicly held firms (consisting of firms with various ownership types) during 2004–2005, we find that organizational slack plays a critical role on firms to sustain their competitive advantages, which is consistent with the result of Tan and Peng (2003).

Second, we find that institutional theory is insightful to find out the impact of institutional transitions on the relationship between organizational slack and firm performance. Existing research based on the resource-based view, organizational inertia perspective, and other theories produces competing findings on the link. Thus, it is critical to explore the link based on more powerful theoretic lens. Institutional theory suggests that the institutional environment of firms would influence firms' strategic choices such as how to use organizational slack (Peng, 2003; Peng & Heath, 1996), and even the value of organizational slack (Guillen, 2000; Wright et al., 2005). Therefore, institutional theory is insightful to discover the impact of organizational slack on firm performance during institutional transitions. This study is the first to discuss how the characters of institutional environment influence the slack–performance link based on the lens of institutional theory.

Third, given the paramount importance of the institutional transitions in transition economies, the lack of studies investigating the impact of institutional transitions on the relationship between organizational slack and firm performance is an important research gap (Tan & Peng, 2003). This paper advocates a model focusing on the influence of institutional environment on the slack–performance link, which adds a deeper and finer-grained understanding on what is behind the impact of organizational slack on firm performance during institutional transitions. We not only support Tan and Peng's (2003) findings on the relationship between organizational slack on firm performance, but also extend this research by introducing the impact of institutional transitions into the slack–performance link. Thus, our research is a "replication with extension" of the research of Tan and Peng (2003).

Finally, as the largest transition economy, China provides a highly interesting setting to refine and test existing management theories (Li & Peng, 2008; Peng et al., 2007). Given that China's growth rates have led the world during past two decades and likely to become the world's second largest economy in the foreseeable future, more knowledge about "what is going on there" has important value (Meyer, 2006; Quer et al., 2007).

Management implications

Based on the findings, this research can offer some useful guidance for firms to enhance their performance. The positive relationship between unabsorbed slack and firm performance suggests that Chinese firms should focus on accumulating unabsorbed slack. Although organizational slack may be economic inefficiency and lead to organizational inertia (Leonard-Barton, 1992), because of the highly uncertainty market environment and weak financial market (Khanna & Palepu, 2000), accumulating unabsorbed slack is still beneficial for Chinese firms. It is also noteworthy that the institutional factors have strong impacts on the performance implication of organizational slack. When confronting low munificence and high dynamism environment, the contributions of slack on firm performance become more significant. Consequently, firms should make good use of their slack to fit the institutional transitions, especially for firms facing resource scarcity and environmental dynamism caused by institutional transitions.

Additionally, because of China's growing importance in the world economy, improved knowledge about China has enormous practical implications for Western firms (Meyer, 2006; Quer et al., 2007). The results can inform Western firms which have and/or will set up joint ventures and/or subsidiary companies in China that organizational slack plays a critical role on performance. They should accumulate more resources internally, especially when confronting low munificence and high dynamism environment. Furthermore, the results also shed light on firms in other transition economies during the institutional transitions (Peng, 2000). These firms also should pay more attention on their slack.

Limitations and future research directions

Although this study replicates the research of Tan and Peng (2003) in a more general and up-to-date context, the effect of absorbed slack on performance is not examined. Because of the high environmental uncertainty in transition economies (Li et al., 2006; Peng, 2003; Peng et al., 2004), firms need to adapt to the environmental change quickly. Absorbed slack can not be deployed easily (Nohria & Gulati, 1996), thus, the performance implication of absorbed slack may pale in transition economies. In addition, because of the high asset specialization, absorbed slack may lead to organizational inertia which will hurt firm performance (Leonard-Barton, 1992), especially in low munificence and high dynamism environment. Therefore, the impact of absorbed slack on firm performance in transition economies and the influence of institutional transitions on this link need our further attentions.

The result of our study is context-specific and should be viewed cautiously when generalized to other contexts. Meanwhile, even if there is a positive relationship between organizational slack and firm performance, there is little research on how to help firms use their organizational slack to obtain and sustain competitive advantage. Thus, how can the firm use organizational slack more effectively is a serious research question, and needs more concentration in future research.

Conclusion

With substantial implications for managers and a base for significant new research on the institutional theory, this work provides an important value-added contribution to our knowledge of the impact of organizational slack on firm performance. This study replicates the research of Tan and Peng (2003) in a more general and up-to-date context, and further extends previous work by advocating and enriching the impact of institutional transitions on this link. Our research finds that unabsorbed slack is critical for firms to sustain their competitive advantages during institutional transitions. In addition, such a positive impact is especially likely to be profound for firms confronting resource scarcity and environmental dynamism caused by institutional transitions. The findings contribute to our understandings of the roles of organizational slack during the process of institutional development of markets. Overall, our findings not only offer a possible explanation for the contradictory results of the relationship between organizational slack and firm performance, but also provide an answer to firms in transition economies on how to better use organizational slack to fit the institutional transitions and further enhance their performance.

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