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William P. WAN

Daphne W. YIU
Singapore Management University, daphneyiu@smu.edu.sg

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RESEARCH NOTES AND COMMENTARIES

FROM CRISIS TO OPPORTUNITY: ENVIRONMENTAL JOLT, CORPORATE ACQUISITIONS, AND FIRM PERFORMANCE

WILLIAM P. WAN[1]* and DAPHNE W. YIU[2]
[1] *Rawls College of Business, Area of Management, Texas Tech University, Lubbock, Texas, U.S.A.*
[2] *Department of Management, Faculty of Business Administration, The Chinese University of Hong Kong, Shatin, Hong Kong*

This study incorporates the external environmental context into the study of corporate acquisitions by examining the performance implications of corporate acquisitions during an environmental jolt that alters the levels of environmental munificence. We posit that compared to the periods before and after an environmental jolt, corporate acquisitions during a jolt would be positively related to firm performance. Furthermore, we suggest that organizational slack would improve firm performance and accentuate the positive relationship between corporate acquisitions and firm performance during an environmental jolt; however, it would have negative impact on firm performance and make the acquisition-performance relationship more negative before and after a jolt. Using the Asian Economic Crisis as a natural experiment, we found general support for our core arguments based on a sample of firms from Hong Kong and Singapore. Our work demonstrates that firms can capitalize on the opportunities created by the changes in an environmental jolt.

INTRODUCTION

> *"The Chinese symbol for crisis combines two simpler symbols, the symbol for danger and the one for opportunity. Crises are times of danger, but they are also times of opportunity."* (Starbuck, Greve, and Hedberg, 1978 : 135)

Keywords: environmental jolt; corporate acquisitions; organizational slack; firm performance; Asian Economic Crisis; environmental munificence
*Correspondence to: William P. Wan, Texas Tech University, Rawls College of Business, Area of Management, Lubbock, TX 79409-2101, U.S.A. E-mail: william.wan@ttu.edu

Acquisitions represent a major corporate strategy, and the topic has captured a lot of attention in strategic management. To date, a majority of studies have found that acquisitions by and large are detrimental to firm performance (e.g., Cartwright and Schoenberg, 2006; Datta, Pinches, and Narayan, 1992). However, despite the large number of studies on the relationship between corporate acquisition strategy and firm performance, the role of the external environmental context, especially environmental jolt, on such a relationship remains underexplored. Primarily drawing upon insights developed in research on discontinuous change and radical environmental transformation (e.g., Audia, Locke, and Smith, 2000; Lant

and Mezias, 1990), our study asks: What are the performance implications of corporate acquisitions during a period when the country environment is experiencing an environmental jolt?

An environmental jolt often dramatically changes the level of environmental munificence, which refers to the level of resources available in an environment (Dess and Beard, 1984). In an environmental jolt, the sudden and discontinuous change in the environment may render existing firm strategies ineffective (Meyer, Brooks, and Goes, 1990). Similar to the Park and Mezias (2005) study on alliance formation, we are particularly interested in investigating environmental jolts that demarcate distinctly different periods of environmental munificence for corporate acquisitions. We postulate that an environmental jolt, often viewed by many as a crisis, would represent an altered set of opportunities, and firms that recognize where these opportunities lie would reap significant benefits. Past studies have shown that stronger corporate turnaround measures will lead to better improvements in firm performance (e.g., Bruton, Ahlstrom, and Wan, 2003). We contend that although acquisitions pose a lot of challenges, and thus easily hurt firm performance, firms that are more aggressive in pursuing acquisitions during an environmental jolt, when opportunities become more abundant, are likely to experience better performance.

Furthermore, because acquisitions are risky and require major resource commitments (Pablo, Sitkin, and Jemison, 1996) but are generally discretionary in nature, we examine the impact of organizational slack (Bourgeois, 1981) in an environmental jolt. We suggest that organizational slack would improve firm performance during an environmental jolt because slack is especially salient when the external environment is less munificent (Cyert and March, 1963); however, slack may induce firms to squander resources before and after an environmental jolt when the external environment is more munificent (Jensen and Meckling, 1976). Therefore, we further posit that slack would accentuate the positive relationship between corporate acquisitions and firm performance during an environmental jolt but would accentuate their negative relationship before and after an environmental jolt.

We test our arguments on a sample of firms from Hong Kong and Singapore, two newly developed economies that experienced the Asian Economic Crisis, which took place in the late 1990s. The Asian Economic Crisis is widely regarded as an environmental jolt that suddenly reduced environmental munificence (e.g., Chakrabarti, Singh, and Mahmood, 2007). Hence, we use the Asian Economic Crisis as a natural experiment for our study. By incorporating environmental jolt as an integral part in the consideration, our study seeks to contribute to the corporate acquisition literature by placing the primary emphasis on the external environmental context, especially during a sudden, discontinuous upheaval. Furthermore, incorporating organizational slack can add new insights to the literature, because slack is especially salient for corporate acquisitions in an environmental jolt. Most previous studies, especially those in the finance literature, have examined acquisitions as individual events. For most firms, however, an individual acquisition is a part of an overall acquisition strategy resulting in a sequence of acquisitions (Kusewitt, 1985; Schijven, 2005). By tracking each firm's acquisitions over a period of time, this study helps to shed additional light on this important corporate strategy topic. Many studies employ changes in share price to determine acquisition performance. Scherer (1988) argues that changes in share price may not reflect efficiency gain or loss, and that it is useful to look at firm profitability. This view is especially relevant for our study, because we compare a firm's sequence of acquisitions over different periods (before, during, and after an environmental jolt). Hence, we use accounting returns as our measures of firm performance. In addition, past research has shown that using the Asian context can help enlighten various strategy topics such as product and international diversification (e.g., Collinson and Rugman, 2007; Peng and Delios, 2006; Peng, Lee, and Wang, 2005). Our sample firms drawn from Hong Kong and Singapore thus have the potential to further generate new knowledge on corporate acquisition strategy.

CONCEPTUAL BACKGROUND AND HYPOTHESES

The importance of the external environment has long been emphasized in the management literature. Organizational actions need to fit with the external environment, and when the environment

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changes, organizations have to change (Chattopadhyay, Glick, and Huber, 2001) because existing strategies may become suboptimal when the opportunities and threats associated with those strategies become redefined and the performance outcomes altered (Audia *et al*., 2000). However, because environmental changes are often ambiguous, firms are likely to perceive them as threatening and hence would act conservatively (Amburgey and Miner, 1992). The transformation process is even more rapid and drastic in the case of an environmental jolt (Park and Mezias, 2005). Some firms find the scope and magnitude of these changes unprecedented and incomprehensible (Meyer *et al*., 1990) and thus hesitate to change their strategies and prefer to stay the course (Pablo *et al*., 1996). However, in an environmental jolt, new opportunities are concomitantly created as the environment redefines attractive market positions (Meyer *et al*., 1990). Rather than viewing an environmental jolt as a crisis that is dangerous or destructive, firms can perceive it largely as changes in the opportunity set in the external environment (Haveman, 1992; Meyer, 1982). To thrive in an environmental jolt, firms have to act more aggressively in order to capitalize on the new opportunity set.

Environmental jolt and corporate acquisitions

Acquisitions have been widely regarded as an important corporate strategy. Corporate acquisitions may bring many benefits, but at the same time involve substantial risks. By acquiring a competitor, firms can eliminate competitive threats or gain economies of scale or market power. Firms facing industry fragmentation or lacking growth may engage in acquisitions to increase their growth rates. In addition, firms seeking to quickly obtain new capabilities often use acquisition strategy to expedite the process. Despite these potential benefits, the findings of extant studies on the performance impact of acquisitions are mixed, suggesting that the intended benefits of acquisitions are difficult to realize (Datta *et al*., 1992). Acquisition problems, such as overpayment and integration difficulty, often prevent firms from realizing the acquisition benefits. Also, when firms divert their energy to integrate newly acquired firms, they might not achieve other strategic goals, such as corporate innovation.

When the environment is munificent, some firms may act imprudently (Lubatkin and Chatterjee, 1991) and thus engage in inappropriate acquisitions. The downsides of an acquisition strategy may become exacerbated as a consequence. In this kind of environment, valuation of targets may be less accurate because firms easily overpay for assets due to the fanatical atmosphere or simply to managerial hubris while bidding wars that lead to the winner's curse are common. Besides, successfully integrating newly acquired firms would become particularly difficult when firms overly focus on making additional acquisitions. Pursuing too many acquisitions in a short period of time or acquiring large targets would easily lead to corporate indigestion, thus severely hurting firm performance (Fowler and Schmidt, 1989; Kusewitt, 1985).

However, the external environment would be thrust into total disarray during an environmental jolt. Performance antecedents and outcomes may be reversed and industry boundaries redrawn or even obliterated (Meyer *et al*., 1990). During such turmoil, many industry leaders would lose their dominance and it would be feasible to enter attractive industries that previously maintained high barriers. Ambitious firms thus would have the incentive to seize the newly created opportunities through acquisitions in order to enter attractive industries. Some firms would engage in bottom fishing by buying assets that had become substantially deflated (Pangarkar and Lie, 2004). Hence, overpayment for acquisitions becomes much less likely. In addition, firms would find it easier to push through restructuring of the acquired firms at a time when acquired firms' stakeholders are more willing to accept a painful restructuring process. From the perspectives of the resource-based view (Penrose, 1959) and dynamic capabilities (Teece, Pisano, and Shuen, 1997), corporate acquisitions during an environmental jolt can be viewed as a way to alter firms' resources and capabilities in order to better adapt to the fast changing environment. Karim and Mitchell (2000) argued that corporate acquisitions offer firms opportunities to reconfigure their businesses by deepening their existing resource bases and obtaining substantially different resources and capabilities. They found that firms that pursue acquisitions are more likely to change and survive than those that do not. Viewed in this light, firms can reap significant benefits from an environmental jolt by seizing new opportunities through corporate acquisitions (Chattopadhyay *et al*., 2001; Meyer, 1982).

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Hypothesis 1a: Corporate acquisitions are positively related to firm performance during an environmental jolt.

Hypothesis 1b: Compared to the period during an environmental jolt, corporate acquisitions are negatively related to firm performance before and after an environmental jolt.

The role of organizational slack

Because the level of environmental munificence is likely to change when an environmental jolt takes place, the role of organizational slack is an important consideration. Organizational slack is defined as a cushion of resources that allows an organization to adapt to internal or external pressures as well as to initiate changes in strategy in regard to the external environment (Bourgeois, 1981). Organization theory suggests that slack usually helps firm performance because it can buffer a firm's technical core from environmental upheavals (Cyert and March, 1963) or allow it to pursue risky strategies (Hambrick and D'Aveni, 1988). Viewed from this perspective, slack is regarded as beneficial. However, slack is sometimes viewed as detrimental. According to agency theory, some managers may use slack to pursue their own goals and therefore engage in inappropriate strategies such as excessive diversification (Jensen and Meckling, 1976). Staw, Sandelands, and Dutton (1981) likewise suggest that slack would dissuade firms to terminate unattractive projects. In a similar vein, Williamson (1964) views slack as essentially a waste; its existence only indicates managerial incompetence.

In line with the recent call by Tan and Peng (2003) that one should adopt a contingency perspective in studying organizational slack, we posit that during an environmental jolt when the level of munificence is low, slack's contribution to firm performance is especially important. The ability to tap into a firm's available resources is crucial not only to cushion the sudden impact of a jolt, but also to quickly capture newly created opportunities during that period of time. This view is more in line with the organization theory perspective. Since the external environment is munificent before and after an environmental jolt, high levels of organizational slack may be detrimental for firm performance because firms are likely to become less prudent in their strategies, as well as in how they use their resources. This view is more in line with the agency theory perspective. Accordingly, slack's positive impact on firm performance would be particularly salient during an environmental jolt, but before and after an environmental jolt, its influence on firm performance would be much compromised.

Hypothesis 2a: Organizational slack is positively related to firm performance during an environmental jolt.

Hypothesis 2b: Compared to the period during an environmental jolt, organizational slack is negatively related to firm performance before and after an environmental jolt.

Pursuing acquisitions requires substantial financial resources. When environmental munificence is higher before and after an environmental jolt, external resources are widely available and firms find it easier to secure funds for acquisitions. When a firm has easy access to external resources and at the same time has a high level of slack internally, it would be easily tempted to take on an increasing amount of risks that may include inappropriate acquisitions, such as those that are overpriced or extremely difficult to integrate. Already overconfident managers may view high levels of slack as their success, and thus become keener on making additional acquisitions while ignoring the difficulty of post-acquisition integration. Some managers may even use slack to pursue acquisitions for empire building (Jensen and Meckling, 1976). As a result, slack would have a much less positive, or even a negative, impact on the relationship between acquisitions and performance during these periods.

In contrast, when an environmental jolt has substantially reduced environmental munificence, slack allows firms to act more aggressively with confidence (Thompson, 1967). Tan and See (2004) found that firms with higher levels of slack were more likely to adopt offensive strategic reorientation in response to the Asian Economic Crisis. This view is also in line with the suggestion of Cheng and Kesner (1997) that slack has different effects on firms' strategic response to environment shifts. With higher levels of slack, firms searching the external environment for attractive acquisition

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targets would still be able to fund the acquisitions without being limited by a lack of external capital. Even if external capital is available, banks are likely to demand high interest rates to compensate for greater uncertainty. Hence, slack can help firms acquire valuable assets at bargain prices during an environmental jolt. In addition, because slack provides immediately available resources (Hambrick and D'Aveni, 1988), it would allow firms to act faster in pursuing attractive acquisition targets during an environmental jolt.

Hypothesis 3a: Organizational slack positively moderates the relationship between corporate acquisitions and firm performance during an environmental jolt.

Hypothesis 3b: Compared to the period during an environmental jolt, organizational slack negatively moderates the relationship between corporate acquisitions and firm performance before and after an environmental jolt.

METHODS

Sample

As an exogenous shock, the Asian Economic Crisis provides us with a natural experiment to test the hypotheses (e.g., Chakrabarti *et al*., 2007). We focus on two economies in East Asia over this tumultuous period of time: Hong Kong and Singapore. Compared to other countries in the region, fewer firms from Hong Kong and Singapore went bankrupt during the crisis, which can mitigate the survivor bias. In addition, these two economies are highly similar in economic, institutional, and cultural characteristics. Focusing on them can reduce country heterogeneity that might bias the results. We used a number of data sources to construct a sample of firms located in these two economies from 1994 to 2002. Firms that do not have a full set of data were eliminated from the final sample. The final sample is a balanced panel consisting of 78 firms from 1994 to 2002 (48 firms from Hong Kong and 30 firms from Singapore). Because acquisitions are less prevalent in this region as compared to some other countries such as the United States, examining the firm's acquisitions on a yearly basis for each period, that is, before the crisis (1994–1996), during the crisis (1997–1999) and after the crisis (2000–2002), would be less appropriate. Therefore, we collapsed the data into three periods to better ascertain a firm's acquisition strategy in each period, yielding a total of 234 observations (78 firms X 3 periods).

Measures

We used return on assets (ROA) and return on equity (ROE) to measure firm performance. The data were obtained from Worldscope and Pacific-Basin Capital Markets (PACAP) Research Center databases. We used two measures to test the effects of corporate acquisitions: the number of acquisitions (e.g., Schijven, 2005) and the size of acquisitions (e.g., Jensen and Zajac, 2004). The number of acquisitions is a total count of acquisitions that the firm had pursued each year. The size of acquisitions sums the dollar amount of those acquisitions. It is scaled by firm size (total sales) and in percentage. The data were collected from SDC Platinum and Lexis-Nexis.

Organizational slack has been measured in various ways. One widely used distinction is between absorbed and unabsorbed slack. Unabsorbed slack emphasizes uncommitted resources that are discretionary in nature, whereas absorbed slack refers to resources that are tied up with ongoing operations and hence much less redeployable (Tan and Peng, 2003). This study focused on unabsorbed slack, because acquisitions require discretionary resources that are easily redeployable. We formed a composite measure of organizational slack using the factor scores from equity to debt ratio (Cheng and Kesner, 1997) and cash flow divided by sales (Davis and Stout, 1992) to capture a firm's slack. Such emphasis is also in line with the finance literature that focuses on excess cash and debt capacity in studying acquisitions (e.g., Bruner, 1988). The data were obtained from Worldscope, PACAP, and various years of *Moody's International Manual and Mergent International Manual*.

We also included a number of control variables. We controlled for firm size by using the logarithm of total assets[1] in U.S. dollars corrected by price index. Sales growth (percentage change in annual

[1] Using total equity or total sales did not change the conclusions of the results. Because the size of acquisitions is scaled by total sales, we used total assets for firm size to reduce any potential multicolinearity effects that may have arisen.

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sales) was used to capture a firm's demand conditions and product cycle effects. Based on the acquiring and target firms' primary business,[2] we controlled for the percentage of related acquisitions. We used the imputed weighted diversification measure (e.g., Wan and Hoskisson, 2003) and change in product diversification to partial out product diversification's effects on firm performance. These two variables also would help further partial out the effects of related acquisitions. With dummy variables, industry effects were controlled for each firm's primary industry class as defined by Worldscope. We used the country competitiveness ranking from various years of IMD's *World Competitiveness Report* and *World Competitiveness Yearbook* and gross domestic product (GDP) growth rate to partial out macroeconomic differences between Hong Kong and Singapore. To control for unspecified effects unique for each economy, we included fixed effects.

Statistical method

Because the unit of analysis for this study is the firm instead of individual acquisition events, and the study has three balanced panels of observations before, during, and after an environmental jolt, we accordingly used panel data analysis. Hausman tests confirmed that random-effects models are appropriate for our data.[3] We used dummy variables to code the three periods, with the jolt period (1997–1999) as the reference period, and interacted the period dummy variables with the independent variables. A statistical significance of the interaction coefficient indicates that the relationship differs between the jolt period and the pre-jolt period (1994–1996) or the post-jolt period (2000–2002). Following Echols and Tsai (2005) and Kim, Hoskisson, and Wan (2004), we tested number of acquisitions and size of acquisitions in separate analyses to mitigate the threat of multicolinearity that may arise from having too many interaction terms in the models, including one that would have three sets of two-way interactions and two sets of three-way interactions. Additionally, we centered the main effect variables, except the dummy variables, before forming all interactions to further mitigate such threat.

RESULTS

Table 1 reports the descriptive statistics for the variables (except dummies). For the full panel across all three time periods in the study, number of acquisitions positively correlates with performance, whereas size of acquisitions has a negative

[2] For cases from SDC Platinum, we coded an acquisition as related based on the reported primary two-digit Standard Industrial Classification code; for cases from Lexis-Nexis, we coded an acquisition as related when their main businesses as reported in the news article are the same.

[3] As a robustness check, the results obtained from fixed-effects models are largely similar to those from random-effects models.

Table 1. Means, standard deviations, and correlations

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. ROA	4.44	6.90											
2. ROE	7.78	13.44	0.88										
3. Firm size	14.15	1.72	0.08	0.24									
4. GDP growth rate	0.38	0.49	−0.09	−0.04	−0.04								
5. World competitiveness ranking	1.75	2.19	−0.02	0.01	−0.01	0.29							
6. Sales growth	6.58	28.04	0.15	0.17	0.09	0.03	0.16						
7. Product diversification	1.19	0.35	−0.14	−0.27	−0.20	0.23	0.06	−0.03					
8. Change in product diversification	0.14	0.21	0.15	0.13	−0.01	0.01	0.44	0.21	0.15				
9. Related acquisitions	2.04	6.82	−0.06	−0.08	0.15	0.03	−0.06	−0.01	0.01	−0.15			
10. Number of acquisitions	0.18	0.49	0.10	0.12	0.33	0.07	−0.04	0.08	0.09	−0.09	0.29		
11. Size of acquisitions	3.19	27.22	−0.26	−0.16	−0.08	−0.07	0.04	−0.07	0.04	−0.02	0.02	0.11	
12. Organizational slack	−0.00	0.43	0.25	0.10	−0.15	−0.18	0.03	0.01	0.05	−0.01	0.05	−0.00	0.02

N = 234. Correlations larger than +0.13 or smaller than −0.13 are statistically significant at the 0.05 level.

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correlation. As for slack, it has a positive correlation with performance. Table 2 reports the main results of the panel data analysis that we employed to test and compare the hypothesized relationships between the jolt and the non-jolt periods. Models 3–6 use number of acquisitions; Models 7–10 use size of acquisitions.

Hypothesis1a, which predicts that acquisitions positively relate to performance during an environmental jolt, receives strong support. The coefficients for number of acquisitions ($p < 0.01$ for Models 3 and 4) and size of acquisitions ($p < 0.01$ for Model 7; $p < 0.001$ for Model 8) are significant. Hypothesis 1b predicts that acquisitions negatively relate to performance before and after a jolt as compared to the jolt-period. For the pre-jolt period, the coefficients for number of acquisitions X pre-jolt dummy in Models 3 and 4 are negative but not significant; the coefficients for size of acquisitions X pre-jolt dummy in Models 7 and 8 are negative and significant ($p < 0.01$; $p < 0.001$). For the post-jolt period, the coefficients for number of acquisitions X post-jolt dummy in Models 3 and 4 are negative and significant ($p < 0.001$; $p < 0.01$); the coefficients for size of acquisitions X post-jolt dummy in Models 7 and 8 are negative and significant ($p < 0.001$). Hypothesis 1b receives support. Hypothesis 2a, which predicts that slack positively relates to performance during a jolt, is strongly supported. The coefficients for slack in Models 3, 4, 7, and 8 are all positive and significant ($p < 0.001$). Hypothesis 2b predicts that slack negatively relates to performance before and after a jolt as compared to during a jolt. The coefficients for slack X pre-jolt in Models 3, 4, 7, and 8 are negative and significant ($p < 0.10$ for Model 3; $p < 0.01$ for Models 4 and 8; $p < 0.05$ for Model 7). The coefficients for slack X post-jolt dummy in Models 3, 4, 7, and 8 are negative and significant ($p < 0.05$ for Model 3; $p < 0.01$ for Models 4, 7, and 8). Hypothesis 2b receives strong support. Hypothesis 3a predicts that slack positively moderates the relationship between acquisitions and performance during a jolt. The coefficients for number of acquisitions X slack in Models 5 and 6 are positive and significant ($p < 0.001$). Likewise, the coefficients for size of acquisitions X slack in Models 9 and 10 are positive and significant ($p < 0.001$). Hypothesis 3a receives strong support. Hypothesis 3b predicts that compared to during a jolt, slack negatively moderates the above relationship before and after a jolt. All coefficients for the three-way interactions for the pre-jolt as well as post-jolt periods are negative and significant (pre-jolt period: $p < 0.05$ for Models 5 and 9; $p < 0.10$ for Models 6 and 10; post-jolt period: $p < 0.001$ for Models 5 and 6; $p < 0.01$ for Models 9 and 10). Hypothesis 3b receives fairly strong support.

DISCUSSION AND CONCLUSIONS

The findings lend support to our central proposition that the external environment, as represented by an environmental jolt in this study, is an important factor in studying the relationship between corporate acquisitions and firm performance. We found general support that corporate acquisitions are positively related to firm performance during an environmental jolt, but the same relationship before and after a jolt is negative in comparison. It is perhaps worthwhile to note that firms in many countries, including those in Asia, are less likely to undertake acquisitions as frequently as their counterparts in some Western countries such as the United States, and therefore acquisitions may be taken as even more 'strategic' for firms in these countries. This may further underscore the relevance of the arguments as advanced in this study. Our results also show that organizational slack positively influences performance during a jolt, but in comparison its influence is negative before and after a jolt. Furthermore, we found evidence that slack positively moderates the relationship between acquisitions and performance during a jolt, and negatively moderates such relationship before and after a jolt. These findings indicate that acquisitive firms have already been provided with sufficient incentives and resources by the external environment during non-jolt periods. Slack would only induce them to act inappropriately. However, during an environmental jolt when environmental munificence is substantially weakened, slack becomes a crucial factor in strengthening the positive relationship between acquisitions and performance. Overall, our findings indicate that whereas many firms may be inclined to act conservatively in an environmental jolt, firms that pursue acquisitions during a jolt benefit from newly created opportunities. Furthermore, our study's findings on

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Table 2. Main results using random-effects models

Variable	ROA Model 1	ROE Model 2	ROA Model 3	ROE Model 4	ROA Model 5	ROE Model 6	ROA Model 7	ROE Model 8	ROA Model 9	ROE Model 10
			Number of acquisitions				Size of acquisitions			
Constant	1.97	−2.42	−6.01	−15.59	−1.70	−5.44	0.24	−5.14	5.09	−3.37
	(5.69)	(10.53)	(6.09)	(11.63)	(6.01)	(11.40)	(5.56)	(11.13)	(5.28)	(10.76)
Firm size	0.59	1.63*	0.79*	1.97**	0.61	1.56*	0.56+	1.65*	0.20	0.97
	(0.38)	(0.71)	(0.38)	(0.73)	(0.37)	(0.71)	(0.33)	(0.66)	(0.32)	(0.65)
Country	−1.70	−1.78	0.76	1.95	0.00	−0.01	0.50	1.75	−0.37	0.10
	(1.52)	(2.83)	(1.61)	(3.09)	(1.58)	(2.98)	(1.50)	(2.98)	(1.40)	(2.81)
GDP growth rate	−0.40*	−0.68+	−0.92**	−1.66**	−0.80**	−1.38**	−0.60*	−1.18*	−0.46+	−0.93+
	(0.18)	(0.35)	(0.28)	(0.55)	(0.28)	(0.52)	(0.28)	(0.55)	(0.25)	(0.49)
World competitiveness ranking	−0.32+	−0.71*	0.06	−0.15	−0.14	−0.65	−0.03	−0.31	−0.13	−0.49
	(0.17)	(0.33)	(0.22)	(0.42)	(0.22)	(0.40)	(0.21)	(0.41)	(0.19)	(0.37)
Sales growth	0.02+	0.05+	0.02	0.04	0.01	0.02	0.01	0.03	0.02	0.05+
	(0.01)	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.03)
Product diversification	−2.65+	−6.75*	−1.25	−4.18	−1.67	−5.01+	−2.04	−5.78+	−1.86	−5.01+
	(1.49)	(2.82)	(1.66)	(3.18)	(1.62)	(3.02)	(1.56)	(3.12)	(1.46)	(2.95)
Change in product diversification	4.32*	5.91	−1.07	−3.65	−0.32	−2.20	0.18	−0.83	0.89	0.17
	(2.09)	(4.06)	(3.00)	(5.78)	(2.92)	(5.45)	(2.97)	(5.83)	(2.69)	(5.29)
Related acquisitions	−0.02	−0.19+	−0.02	−0.17	−0.03	−0.20*	−0.03	−0.19+	−0.01	−0.16+
	(0.06)	(0.11)	(0.05)	(0.10)	(0.05)	(0.10)	(0.05)	(0.10)	(0.05)	(0.09)
Pre-jolt dummy			6.20**	10.80**	3.95+	6.75	3.01	4.70	1.25	0.64
			(2.13)	(4.12)	(2.24)	(4.16)	(2.18)	(4.25)	(2.19)	(4.23)
Post-jolt dummy			1.37	2.69	1.19	2.22	−0.39	−0.87	−0.25	−0.48
			(1.25)	(2.42)	(1.22)	(2.26)	(1.29)	(2.51)	(1.16)	(2.26)
Number/size of acquisitions			4.60**	8.48**	3.47*	5.44*	0.45**	1.08***	0.35**	0.84**
			(1.69)	(3.25)	(1.68)	(3.12)	(0.16)	(0.32)	(0.15)	(0.29)
Number/size of acquisitions X pre-jolt dummy			−0.84	−1.54	−5.56	−4.45	−0.41**	−1.00***	−0.69*	−1.84**
			(2.37)	(4.57)	(5.73)	(10.67)	(1.66)	(0.32)	(0.34)	(0.67)

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Table 2. (*Continued*)

Variable	ROA Model 1	ROE Model 2	ROA Model 3	ROE Model 4	ROA Model 5	ROE Model 6	ROA Model 7	ROE Model 8	ROA Model 9	ROE Model 10
			Number of acquisitions				Size of acquisitions			
Number/size of acquisitions X post-jolt dummy			−5.11*** (1.64)	−9.73** (3.17)	−2.76+ (1.78)	−3.76 (3.31)	−0.52*** (0.16)	−1.14*** (0.32)	−0.42** (0.15)	−0.91*** (0.29)
Organizational slack			8.88*** (2.76)	18.15*** (5.30)	7.60** (2.68)	15.07** (5.03)	9.86*** (2.62)	18.85*** (5.18)	13.42*** (2.50)	25.61*** (4.95)
Organizational slack X pre-jolt dummy			−4.09+ (2.79)	−12.93** (5.38)	−10.28* (6.00)	−19.32* (11.16)	−5.03* (2.79)	−14.03** (5.45)	−7.04* (3.64)	−15.45* (7.13)
Organizational slack X post-jolt dummy			−5.73* (2.58)	−14.12** (4.97)	−5.14* (2.50)	−12.76** (4.66)	−6.69** (2.53)	−14.87** (4.96)	−7.37** (2.54)	−16.73*** (4.97)
Number/size of acquisitions X Organizational slack					16.15*** (4.40)	40.97*** (8.22)			2.87*** (0.53)	5.51*** (1.01)
Number/size of acquisitions X slack X pre-jolt dummy					−53.71* (30.83)	−82.85+ (57.35)			−1.79* (1.01)	−2.61+ (1.98)
Number/size of acquisitions X slack X post-jolt dummy					−18.21*** (4.58)	−45.77*** (8.52)			−1.63** (0.59)	−3.33** (1.15)
Industry class dummies	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
R^2 (within)	0.15	0.16	0.30	0.32	0.37	0.43	0.31	0.30	0.46	0.46
R^2 (between)	0.12	0.21	0.24	0.28	0.27	0.31	0.37	0.34	0.46	0.38
R^2 (overall)	0.13	0.19	0.26	0.29	0.31	0.36	0.34	0.32	0.45	0.41
Wald χ^2	35.66***	48.29***	84.01***	93.33***	108.86***	137.60***	105.58***	98.42***	172.62***	160.90***

N = 234. Standard errors are reported in brackets. Two-tailed tests for control variables; one-tailed tests for hypothesized variables.
+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

slack provide support to the contingency perspective as advocated by Tan and Peng (2003).

Past work on acquisitions focuses on firm- or acquisition-specific characteristics and does not pay sufficient attention to the importance of the external environmental context. Our findings underline the importance of incorporating such context into the study of corporate acquisitions. Instead of assuming a stable external environment, we adopt a natural experiment approach to compare the relationship between corporate acquisitions and firm performance before, during, and after an environmental jolt. Our study provides a valuable starting point for future research on how the external environmental context may affect corporate acquisitions. More research in this direction would be fruitful. Our study also incorporates the concept of organizational slack into the study of corporate acquisition strategy. Past research generally views slack mostly as a buffer against environmental changes. Our study shows that slack can also provide crucial resources for firms to better capture opportunities more aggressively in an environmental jolt. Nevertheless, the impact of slack on performance may not always be as potent at all times and would even accentuate the negative relationship between acquisitions and performance, especially when the external environment is munificent. As such, future research on strategic change would find it worthwhile to consider slack's differential impacts. Additionally, this study broadens the geographic scope of the study on acquisition strategy to two newly developed economies in Asia. Recent studies have highlighted both the change and the continuity of distinctive institutional elements in firms after the Asian Economic Crisis (Yeung, 2006). It is conceivable that institutional elements influence acquisition strategy in these economies. For example, Asian firms may have greater propensity for unrelated acquisitions than related acquisitions (Peng *et al*., 2005) and hence the associated performance implications likely differ from those in the United States. Our data only allow us to treat acquisition relatedness as a control variable. It would be fruitful to conduct a rich study on this aspect using the Asian context. Moreover, given the unique governance system in some Asian economies, additional research may focus on governance's impact on corporate acquisition strategy (Young *et al*., 2008).

In summary, our study highlights the importance of incorporating the external environmental context into the study of corporate acquisition strategy. More specifically, it demonstrates that firms should not view environmental jolts as necessarily dangerous or destructive. To the extent that firms can recognize new opportunity sets and change their strategies accordingly, they can capitalize on the opportunities created by the changes.

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