

**INSTITUTIONS AND CROSS-BORDER MERGERS & ACQUISITIONS (M&A)
VALUE CREATION**

A Dissertation

by

HONG ZHU

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2008

Major Subject: Management

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ABSTRACT

Institutions and Cross-border Mergers & Acquisitions (M&A) Value Creation.

(December 2008)

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Chair of Advisory Committee: Dr. Michael A. Hitt

Cross-border Merger and Acquisitions (M&As) are an increasingly important strategy adopted by firms in order to create value in fiercely competitive global markets. Cross-border M&A value creation, that is, wealth creation for shareholders from cross-border M&As, is therefore of considerable theoretical and practical importance. However, our understanding of the sources of cross-border M&A value creation remains limited. Researchers have found that the most commonly researched variables have little effect on cross-border M&A value creation. We therefore still do not understand the processes behind cross-border M&As.

In this dissertation I examine the main effects of host country regulatory, economic and physical infrastructure institutions on cross-border M&A value creation. I further examine the moderating effects of host country political institutions on the relationship between host country regulatory institutions and cross-border M&A value creation. Moreover, I investigate the effects of institutional distance between host and home country on cross-border M&A value creation. I argue that the effects of institutional

distance (regulatory and economic distance) on cross-border M&A value creation are not symmetric, but rather the effects are contingent upon the direction of the distance. My hypotheses are tested on a sample of 6141 cross-border M&As between 1995 and 2003.

Results of this analysis show that acquirers are more likely to create value by acquiring targets in countries with less advanced regulatory institutions. Further, my results indicate that host country political institutions positively moderate the relationship between host country regulatory institutions and cross-border M&A value creation. Host country economic institutions have an inverted U-shaped relationship with cross-border M&A value creation, and host country physical infrastructure institutions have a positive relationship with cross-border M&A value creation.

Additionally, results show that there is an inverted U-shaped relationship between institutional distance and cross-border M&A value creation. The findings suggest that the effects of regulatory and economic institutional distance on cross-border M&A value creation are not symmetric. The effects are contingent upon the direction of the distance. That is whether the level of host country institutions is higher or lower than that of home country institutions. Implications for management and public policy are discussed.

DEDICATION

The dissertation is dedicated to my mum, grandma, grandpa and brother.

First, I dedicate this dissertation to my mum, for her deep love, always strong support and encouragement when I am down and when I am up!

Second, I dedicate this dissertation to my grandma and grandpa, for their deep love, for giving me a happy, meaningful and memorable childhood, and for always firmly supporting my pursuit of higher education!

Third, I dedicate this dissertation to my brother, for making me smile when I am down, for giving me insightful suggestions when I am lost, for sharing the happiness with me, and for his deep love, support and encouragement!

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TABLE OF CONTENTS

	Page
ABSTRACT	iii
DEDICATION	v
ACKNOWLEDGEMENTS	vi
TABLE OF CONTENTS	ix
LIST OF FIGURES	xi
LIST OF TABLES	xii
 CHAPTER	
I INTRODUCTION.....	1
Overview of the Dissertation Research	3
Contributions of the Dissertation Research.....	9
Organization of Dissertation	13
II THEORY AND HYPOTHESES	15
Theoretical Base	15
Institutional Control and Cross-border M&A Value Creation.....	28
Institutional Distance.....	50
Summary	72
III METHODOLOGY	74
Sample	74
Measures.....	77
Statistical Analytical Techniques	90
IV RESULTS.....	94
Descriptive Statistics	94
Global Event Study	102
HLM Null Model	106

CHAPTER	Page
Tests of Hypotheses	109
Summary of Results	163
V DISCUSSION AND CONCLUSIONS.....	168
Overview	168
Theoretical Contributions.....	170
Managerial and Public Policy Implications	186
Future Research.....	190
REFERENCES.....	194
APPENDIX A	214
APPENDIX B	215
APPENDIX C	217
APPENDIX D	219
APPENDIX E.....	221
APPENDIX F	222
APPENDIX G	223
VITA	224

LIST OF FIGURES

FIGURE	Page
1	Institutional Control and Cross-border M&A Value Creation Theoretical Model 29
2	Institutional Distance and Cross-border M&A Value Creation Theoretical Model 51
3	Illustration of Two-level Design 93
4	Main Effects of Host Country Regulatory Institutions on Tobin's Q_2 120
5	Curvilinear Effects of Host Country Economic Institutions on Tobin's Q_2 126
6	Moderation Effects of Host Country Political Institutions on the Relationship between Host Country Regulatory Institutions and $CAR_{-19,0,+1}$ 137
7	Moderation Effects of Host Country Political Institutions on the Relationship between Host Country Regulatory Institutions and Tobin's Q_2 138
8	Moderation Effects of Regulatory Distance Asymmetry on the Relationship between Regulatory Distance and $CAR_{-19,0,+1}$ 149
9	Moderation Effects of Regulatory Distance Asymmetry on the Curvilinear Relationship between Regulatory Distance and $CAR_{-19,0,+1}$... 155
10	Moderation Effects of Regulatory Distance Asymmetry on the Curvilinear Relationship between Regulatory Distance and Tobin's Q_2 ... 156
11	Moderation Effects of Economic Distance Asymmetry on the Relationship between Economic Distance and $CAR_{-19,0,+1}$ 162
12	Moderation Effects of Economic Distance Asymmetry on the Relationship between Economic Distance and Tobin's Q_0 185

LIST OF TABLES

TABLE	Page
1	Descriptive Statistics and Correlations for Level-1 Variables 95
2	Descriptive Statistics and Correlations for Level-2 Variables 96
3	VIF Scores 101
4	Daily Abnormal Return (AR) and Cumulative Abnormal Return (CAR) for Cross-border M&A Announcements 102
5	Global Event Study Variable Name and Label 103
6	Null Model 107
7	Results of Null Model 108
8	Control Variable Model 112
9	Hausman Endogeneity Test: Control Variable Model 113
10	Control Effects 114
11	Host Country Regulatory Institutions Main Effect Model 117
12	Hausman Endogeneity Test: Hypothesis 1 Host country Regulatory Institutions Main Effect Model 118
13	Hypothesis 1 Host country Regulatory Institutions Main Effect Model.... 119
14	Host Country Economic Institutions Curvilinear Effect Model..... 123
15	Hausman Endogeneity Test: Hypothesis 2 Host Country Economic Institutions Curvilinear Effect Model 124
16	Hypothesis 2 Host Country Economic Institutions Curvilinear Effect Model 125
17	Host Country Physical Infrastructure Institutions Effect Model..... 129
18	Hausman Endogeneity Test: Hypothesis 3 Host Country Physical

TABLE	Page
Infrastructure Institutions Model.....	130
19 Hypothesis 3 Host Country Physical Infrastructure Institutions Model	131
20 Host Country Regulatory and Political Institutions Effect Model	134
21 Hausman Endogeneity Test: Hypothesis 4 Host Country Political and Regulatory Institutions Effect Model	135
22 Hypothesis 4 Host Country Regulatory and Political Institutions Effect Model	136
23 Institutional Distance Effect Model	141
24 Hausman Endogeneity Test: Hypothesis 5 Institutional Distance Effect	142
25 Hypothesis 5 Institutional Distance Effect Model	143
26 Asymmetric Regulatory Distance Main Effect Model.....	146
27 Hausman Endogeneity Test: Hypothesis 6a Asymmetric Regulatory Distance Main Effect Model	147
28 Hypothesis 6a Asymmetric Regulatory Distance Main Effect Model	148
29 Hypothesis 6b Asymmetric Regulatory Distance Curvilinear Effect Model	152
30 Hausman Endogeneity Test: Hypothesis 6b Asymmetric Regulatory Distance Curvilinear Effect Model	153
31 Hypothesis 6b Asymmetric Regulatory Distance Curvilinear Effect Model	154
32 Asymmetric Economic Distance Effect Model.....	159
33 Hausman Endogeneity Test: Hypothesis 7 Asymmetric Economic Distance Effect	160

TABLE	Page
34 Hypothesis 7 Asymmetric Economic Distance Model	161
35 Summary of Results	166

CHAPTER I

INTRODUCTION

Given that cross-border M&As represent an increasingly important strategy adopted by firms in the fiercely competitive global market, cross-border M&A value creation is of considerable theoretical and practical importance (Hitt, Franklin, & Zhu, 2006a; Shimizu, Hitt, Vaidyanath, & Pisano, 2004). Evidence suggests that the ratio of the value of cross-border M&A transactions to world foreign direct investment (FDI) inflows increased from 52 percent in 1987 to over 78 percent in 2006 (World Investment Report, 2006). The value of cross-border M&A transactions reach record level of \$3.79 trillion in 2006 (Thomson Financial, 2007). Since then, cross-border M&As have continued growing at an exponential rate, and been perceived as one of the fundamental drivers of FDI (Shimizu, et al., 2004).

Despite their importance, our understanding of the sources of acquirers' cross-border M&A value creation remains limited (King, Dalton, Daily, & Covin, 2004). M&A theorists have emphasized that acquirers need to be prudent in selecting their targets (Hitt, Ireland & Harrison, 2001a).

This dissertation follows the style of *Academy of Management Journal*.

Further, M&A researchers have devoted huge efforts to examining how the acquirer and target firms can integrate with each other and achieve the synergy between them (e.g., Cording, Christmann, & King, 2008; Hitt et al., 2001a). However, King, et al.'s (2004) meta-analysis found that the most commonly researched variables such as acquirers' M&A experiences, managerial hubris, and resource complementarities between the acquirer and the target, have little effect on cross-border M&A value creation.

Strategic management research has long suggested that value creation is context dependent. Yet, it is surprising that researchers have paid little attention to the external environments in which the acquirer and target firms are embedded. One exception is McNamara, Haleblan and Dykes (2008) who investigated and found that acquisition waves and industry environments influence acquirers' value creation. Institutional theorists suggest that country institutions provide incentives and constraints, and thus determine the existence of certain types of firms (North, 1991; North, 2005; Scott, 2001). Extending M&A theorists' suggestion that acquirers need to search prudently and identify the right target, I advocate that it is necessary for acquirers to search prudently and identify the right host country in which the right target is likely to be created.

Institutional theorists also suggest that a country's institutional environment shapes its embedded firms' strategic behavior and thus affects their value creation (North, 1990; Scott, 2001). Certainly, home and host country's institutional environment influences the acquirer and the target's strategic behavior. The difference between host country and home country institutional environment causes the acquirer and the target behave

differently, and thus increases the difficulties of integrating between the acquirer and the target (e.g., Kostova, 1996; Kostova, & Zaheer, 1999; Hitt, et al., 2006a; Shimizu, Hitt, Vaidyanath, & Pisano, 2004). For example, Bhagat, Kedia, Harveston and Triandis (2002) suggested that institutional difference may negatively affect knowledge transfer between the acquirer and the target in post-acquisition processes, and thus negatively affect cross-border M&A value creation.

However, little research on the effects of country institutions on cross-border M&A value creation has been completed (e.g., King, Dalton, Daily, & Covin, 2004; Shimizu, et al., 2004). This oversight in the literature indeed explains the ambiguity in cross-border M&A value creation as shown in the King, et al. (2004) meta-analysis.

In this dissertation, I show how neglected, and yet important institutional forces affect acquirers' cross-border M&A value creation. Specifically, I examine how host country institutions, and institutional distance (defined as the difference between home and host country institutional environments) influence cross-border M&A value creation.

Overview of the Dissertation Research

Institutional scholars from multiple disciplines (e.g., economics, international strategy, political science, sociology) provide diverse perspectives regarding the meaning of institutions and place emphasis on different aspects of institutions. On the basis of their understanding of country institutions, scholars explain distinct firm behaviors such as firm legitimacy, transaction costs, and new geographic market entry and entry strategies. For example, institutional sociologists underscore regulatory, normative and cognitive pillars that contribute to the foundation of legitimacy claims

(Scott, 2001). International strategy scholars emphasize political risks that influence firms' foreign investment decision and entry strategies (Henisz, 2000a; Henisz & Delios, 2001; Rodriguez, Uhlenbruck, & Eden, 2005). Institutional economists conceptualize institutions as rules of the game that decrease firms' transaction costs (North, 1990). Previous institutional work from multiple disciplines advances our understanding of multifaceted country institutions. Like a double-edged sword, previous institutional work also adds challenges and complexities that may hinder institutional research.

These numerous and diverse institutional dimensions that scholars propose are based on their own discipline's assumptions. Different discipline's assumptions not only result in different conceptualizations of institutions, but also lead to varying, and even inconsistent hypotheses about how institutions can influence social actors and social activities (Scott, 2001). While a unified analytic framework of institutions is needed to advance institutional research, juxtaposing the above mentioned diverse institutional dimensions representing different discipline assumptions underlying them might lead to theoretical fragmentation rather than theoretical integration. We are well short of a unified analytic institutional framework.

In this work, I first extend theoretical efforts to better understand a country's institutional environment. The theoretical perspective of this work begins with the premise that the government makes choices that give rise to markedly different institutional arrangements regulating social and economic activities within a country and related to other countries (North & Thomas, 1973; Scott, 2001; Searle, 1995). For example, Rugman (2002) found that Irish government implemented new policies to

create a stable macroeconomic and financial environment that fosters Irish adaptation to and participation in the global economy.

On the basis of this underlying assumption, I propose the concept of institutional control defined as the government's attempts to influence social and economic activities. While several researchers have proposed institutional control, the definition of institutional control in this work differs from previous ones (e.g., Goodstein, 1994; Hall, 1988; Steven, 1993). Goodstein (1994) referred institutional control that firms are enforced to conform to particular norms when many other firms have adopted them (i.e., normative institutional pressures to conform). On the basis of the underlying assumption of a country's institutional environment in this work, normative institutional pressures to conform are beyond the definition of institutional control here. Further, Hall (1988) defines institutional control as industry associations' managerial control techniques (i.e., health care institutions' managerial control techniques to monitor physicians' treatment behavior). Steven (1993) refers institutional control as governments' direct involvement in firms' management (e.g., providing direction and evaluating the performance of Crown corporations). This differs from institutional control in this work that the governments use country institutions to regulate social and economic activities within a country and related to other countries directly and indirectly.

According to previous institutional research, I advocate four institutions that the government uses to influence social and economic activities (i.e., institutional control) including regulatory, economic, physical infrastructure, and political institutions (Ayres, 1944; Ghemawat, 2001; Henisz, 2000a; Hitt, Holmes, Miller, & Salmador, 2008; North,

1990; Scott, 2001). Regulatory institutions refer to laws, regulations and government policies, such as trade policies and property rights (Hitt, et al., 2008; North, 1990; Scott, 2001). Economic institutions measure the impediments to cash flow within a country. Physical infrastructure institutions regard the level and quality of physical support systems that facilitate business communication and operations in a country (Ghemawat, 2001; Hitt, et al., 2008). Political institutions represent the level of discretion and power a government maintains over its citizenry (Henisz, 2000a; Hitt, et al., 2008). These four institutions form a configuration of institutional control for the government. Further, it is important to note that these four institutions evolve by entirely different mechanisms, yet they are not independent. Moreover, these four institutions are indeed coordinating mechanisms between social actors and social processes of value creation. Like production and strategic factors, these four institutions are important in explaining economic activities and their value creation (Potts, 2007).

Secondly, as acquirers attempt to locate the right target and secure valuable assets at favorable prices in foreign countries, they are constrained by large information asymmetries and thus face the risk of adverse selection. As a result, they are likely to pay too high premiums for foreign targets they acquire (Krishnan, Hitt, & Park, 2007). As mentioned earlier, a country's institutional environment determines the existence of certain types of firms. Thus, acquirers need to search prudently the right host country that the right target is likely to be created. Country institutions endogenously chosen by the government over the long run are also observable and salient to foreign acquirers (Hitt et al., 2008). These observable and salient host country institutions are able to

provide valuable information for foreign acquirers and thus lessen information asymmetries (Ragozzino & Reuer, 2006).

Moreover, one prominent theme of institutional research is that a country's institutional environment affects its embedded firms' strategic behavior and thus value creation (North, 1990; Scott, 2001). As cross-border M&As involve long-term direct investments rather than short-term capital movements (Carr, Markusen, Maskus, 2002), host country institutions exert an additional, important and yet potentially unfamiliar institutional force affecting acquirers' cross-border M&A value creation. I unpack main effects of four host country institutions on cross-border M&A value creation in this work.

While four institutions represent different aspects of a country's institutional environment, they are interdependent with each other in affecting embedded firms' strategic behavior and value creation (North, 1990; Henisz, 2000a). For example, institutional economists conceptualize institutions as rules of the game that provide predictability and security for exchange. Thus, institutions (i.e., regulatory institutions) decrease firms' transaction costs (North, 1990). Yet, international strategy scholars emphasize that political hazards (i.e., political institutions), defined as the feasibility of policy changes by the host country government, increase firms' transaction costs and thus decrease the likelihood of FDI (e.g., Henisz, 2000a). Given that regulatory and political institutions interact with each other to enable or constrain firms' strategic behaviors and thereby affect value creation (Franzese, 1999), I examine the interaction between host country regulatory and political institutions on cross-border M&A value creation.

Third, in addition to host country institutions, extant research suggests that institutional distance, defined as the institutional difference between the host country and the home country, affects cross-border M&A value creation (Bhagat, et al., 2002; Morosini, et al., 1998; Nahapiet & Ghoshal, 1998). On the one hand, institutional distance may negatively affect knowledge transfer between the acquirer and the target in the post-acquisition processes, and thus decrease cross-border M&A value creation (Bhagat, et al., 2002). Ghemawat (2001) posited that it is costly for firms to operate in a distant institutional market. On the other hand, institutional distance can positively affect knowledge creation as acquirers are likely to access different and valuable knowledge stocks in new institutional environments (Morosini, et al., 1998; Nahapiet & Ghoshal, 1998). Ghemawat (2003) also suggested that firms may adopt an arbitrage strategy and thus are able to benefit from institutional distance. Hence, understanding of the effects of institutional distance on cross-border M&A value creation remains a challenge.

In this work I propose the concept of institutional distance asymmetry. Institutional distance asymmetry suggests that the effects of institutional distance on cross-border M&A value creation are not symmetric. That is, these effects are conditional on the direction of the distance. For example, the institutional distance from the United States to China is the same as institutional distance from China to the United States, using existing measures for institutional distance. However, the effects of institutional distance for U.S. acquirers acquiring Chinese targets, and Chinese acquirers acquiring U.S. targets may be different. U.S. acquirers with rich resources and strong capabilities are able to deal with the distance, and even can capitalize on the institutional distance (i.e.,

different and valuable resources in China). Yet, Chinese acquirers with much less resources and weak capabilities may not be able to do so (Hitt, Dacin, Levitas, Arregle, & Borza, 2000). I expect that asymmetric institutional distance may help to clarify the effects of institutional distance on acquirers' cross-border M&A value creation.

Finally, the effects of institutions on cross-border M&A value creation are more salient in certain industries. In this work I examine cross-border M&As in industries that are technologically driven and/or have technological components such as telecommunication, semiconductor, internet, software, computer, disk drives, and lasers. Indeed, complex technologies are often cited as an inducement for internalization (i.e., M&A). Further, in addition to diverse institutional forces that cross-border M&As generally encounter, knowledge transfer, integration, and creation involved in cross-border M&As in technology industries are significantly affected by home and host country institutions in which the acquirer and the target are embedded. Recent M&A research suggested that obtaining technological know-how and developing technical capabilities are increasingly important motives for M&As (Ahuja & Katila, 2001).

Contributions of the Dissertation Research

This work makes contributions to the M&A, institutional theory and strategic management literatures. The first primary contribution is to cross-border M&A research. By showing that host country institutions and institutional distance between the home and the host country affect cross-border M&A value creation, this work helps open the black box of cross-border M&A value creation.

Strategic management and international business scholars have long examined the factors that affect firms to choose cross-border M&A as their foreign entry strategy (Hennart & Reddy, 1997; Shimizu, et al., 2004). Hennart and Reddy (1997) found that equity international joint ventures (IJV) are preferred over cross-border M&As when the desired assets are linked to nondesired assets; when the Japanese investor has little previous experience of the American market; when the Japanese investor and the U.S. partner manufacture the same product; and when the industry entered is growing neither very rapidly nor very slowly. Reuer (2001) found that firms' abnormal returns from IJV partner buyouts are positively related to the firm's R&D intensity.

Recently scholars have started to investigate host country institutions that influence firms to choose cross-border M&A as entry mode (Brouthers, 2002; Hitt et al., 2008). Brouthers (2002) found that firms entering countries with few legal restrictions tend to use wholly owned entry mode while firms entering countries with many legal restrictions tend to use joint venture. Researchers also found that the level of corruption in the host country influence firms to choose cross-border M&A as their entry mode (Habib & Zurawicki, 2002; Uhlenbruck, Rodriguez, Doh, & Eden, 2006). However, we have limited understanding of the effects of country institutions on cross-border M&A value creation. I attempt to fill this research gap in this work.

To advance our understanding of the impacts of country institutions (i.e., institutions in the host country, and institutional distance) on cross-border M&A value creation, this work makes a second major contribution that builds upon previous institutional work. This work goes beyond the typical way in which institutional environment has been

defined and thus institutional theory has been used in international management (Westney, 1993). Existing institutional research from multiple disciplines has examined diverse dimensions of a country's institutional environment and their effects on firms' behaviors thereby advancing our understanding of a country's institutional environment. However, as the underlying assumptions of these various institutional dimensions differ, these numerous institutional dimensions indeed cause theoretical fragmentation, hindering the further and integrated understanding of a country's institutional environment, and the consequences of the institutional environment. On the basis of the assumption that the government makes choices that give rise to markedly different institutional arrangements regulating social and economic activities within a country and related to other countries, I contribute by proposing the concept of institutional control. Further, I propose four institutions that the government uses to control social and economic activities. These four institutions are regulatory, economic, physical infrastructure, and political institutions.

Each of these four institutions with its own "rules of the game" defines a distinct space of economic opportunities (Potts, 2007). In this work I show that it is important to differentiate the effects of each institution on cross-border M&A value creation from others. Four institutions are also interdependent with each other and form an integrated institutional control within a country. Accordingly, I examine the effects of interaction between these institutions on cross-border M&A value creation.

Third, this work contributes to institutional distance research stream by proposing and investigating the effects of asymmetric institutional distance on cross-border M&A

value creation in this work. Researchers have recently started to examine institutional distance and its effects on entry modes and firm survival. For example, researchers have examined the effects of the difference of the corruption levels between the host and the home country on entry mode decisions (Habib & Zurawicki, 2002). Perkins (2006) examined firms' prior experiences in other foreign countries (measured as the similarity of regulatory institutions between the parent country and previously entered foreign countries) on their survival in Brazil. Researchers suggested that institutional distance may have both positive and negative effects on firms' value creation. When examining the effects of institutional distance on cross-border M&A value creation, I highlight the importance of considering the direction of institutional distance simultaneously. Taking into account the direction of institutional distance helps to clarify the effects of institutional distance on firms' value creation.

Fourth, highlighting the impacts of country institutions on cross-border M&A value creation, I make an important contribution to the strategic management literature. Because strategic management is partly based in economics, strategic management theories have emphasized the effects of the market (e.g., market failure) on firms' behavior and value creation. While market forces are influential in developed countries, they are rather weak in most less developed countries. Previous research has suggested that institutions-non-market factors tend to affect firms' strategy (e.g., Hitt et al., 2004; Zhu, Hitt, & Tihanyi, 2006). Boddewyn and Brewer (1994) suggested that non-market forces affect multinational firms' political behavior. Rugman (2002) suggested that institutional environments in Ireland have indirect effects on firms domiciling in Ireland,

affecting not only the resources allocated to particular types of firms but also firm vision. Spencer, Murtha, & Lenway (2005) suggested that political institutional structures may influence firms' tendencies to engage in entrepreneurship. Institutional non-market forces are the underlying and influential forces on firms' value creation in the global market. Indeed, markets are embedded in institutions and thus affected by them in significant ways (North, 1990).

Finally, as called by North (2005) to improve the predictive ability of institutions, this work relies on Hitt, et al.'s (2008) extensive institutional environment dataset, and demonstrates the effects of four institutions and institutional distance on acquirers' cross-border M&A value creation, using cross-border M&A data collected from SDC Thomson's International M&As Database. Lastly, I discuss practical implications for managers, and public policy implications for governments.

Organization of Dissertation

This dissertation is organized in the following manner: Chapter II – Theory and Hypotheses starts with theoretical base section. In this section, I review the extant literature including cross-border M&As, institutions and cross-border M&A value creation, and institutional distance, thus providing theoretical groundwork for the proposed new concepts (i.e., institutional control, institutions and asymmetric institutional distances), and theoretical models. Then the hypotheses are developed and presented in next two sections including institutional control and cross-border M&A value creation, and institutional distance.

Chapter III – Methods details the methodologies that were used to test hypotheses. Specifically, I discuss sample selection, measures, and statistical models in this chapter. Chapter IV – Results presents the results of statistical tests. Chapter V – Discussion presents an overview of this dissertation research, discusses the theoretical implications, practical implications for management and public policy implications for the government. The chapter closes with the discussion of the limitation, the direction of future research and the conclusion.

CHAPTER II

THEORY AND HYPOTHESES

Chapter II includes four sections: (1) theoretical base, (2) institutional control and cross-border M&A value creation, (3) institutional distance, and (4) summary. The primary purpose of section one is to use the extant cross-border M&A and institution literature to build the theoretical base for the new concepts and hypotheses. Further, new concepts of institutional control, institutions and asymmetric institutional distance are proposed in this section. These new concepts provide theoretical building blocks leading to the hypotheses development. In section two, hypotheses pertaining institutional control and cross-border M&A value creation are developed. In section three, institutional distance and cross-border M&A value creation are developed. Finally, section four provides a summary for this chapter.

Theoretical Base

Cross-border M&A and Value Creation

M&A has long been and continues to be one of the key strategies for firms to grow, manifesting as five M&A waves since 1880s (e.g., Goergen & Reneboog, 2004; Hitt et al., 1990). In the most recent M&A wave, predominant numbers of M&As occur across borders (Shimizu, et al., 2004). Cross-border M&A is an extremely prevalent strategy for firms to compete in the global market. M&A has been representing an important topic of repeated scholarly inquiry (e.g., Graebner & Eisenhardt, 2004; Haleblan, Kim, & Rajagopalan, 2006; Hitt, Harrison, & Ireland, 2001b; Hitt, Ireland, & Harrison, 2001a; Hitt, Harrison, Ireland, & Best, 1998; Hitt, Hoskisson, & Ireland, 1990; Hitt, Hoskisson,

Ireland, & Harrison, 1991; Hitt, Hoskisson, Johnson, & Moesel, 1996; Shimizu, et al., 2004; Puranam, Singh, & Zollo, 2006). Cross-border M&A highlights its own importance in the increasingly integrated global market, and has received much scholarly attention in recent years (e.g., Hitt et al., 2001a; Hitt, et al., 2001b).

Prior M&A research has advanced our knowledge about this key strategy – cross-border M&A. Three research streams have been dominating in M&A research (Barkema & Vermeulen, 1998; Hayward & Hambrick, 1997; Hennart & Reddy, 1997; Schweizer, 2005; Vermeulen & Barkema, 2001; Zollo & Singh, 2004). First, researchers have examined the factors that influence firms to merge or acquire other firms (Hennart, & Reddy, 1997; Hitt et al., 2006). Previous work emphasizes that market failure for intangible assets (e.g., competences are irreducible) is one of the important reasons for M&As, in addition to economic efficiency and market power (Capron, 1999; Uhlenbruck, Hitt, & Semadeni, 2006). However, market failure is not an uncommon phenomenon across countries. Markets are not well developed in many emerging economies and developing countries (Khanna & Palepu, 1997). Second, researchers have investigated that firms choose M&A as the entry strategy, particularly cross-border M&A as the foreign entry strategy. Foreign entry strategies include cross-border M&As, international joint ventures, international strategic alliance, Greenfield, and export (Hitt, et al., 2006a; Hitt, M.A., Dacin, Levitas, Arregle, & Borza, 2000; Isobe, Makino, & Montgomery, 2000; Zahra, Ireland, & Hitt, 2000). For example, Hennart and Reddy (1997) suggested that firms prefer international joint ventures rather than cross-border M&As because managers perceive less synergy with firms from distant markets.

Third, M&A researchers have devoted tremendous efforts in understanding how acquirers can create value from M&As. Cross-border M&A value creation is the creation of wealth from cross-border M&As for shareholders (Krishnan, et al., 2007; Shimizu, et al., 2004). Researchers have primarily adopted a synergy perspective, suggesting that M&A allows the acquirer (the combined firm) to create more value than the sum of values that the independent acquirer and target create (Hitt et al., 2001a). This line of research includes studies of post-acquisition integration processes, resource complementarities between the acquirer and the target, new geographic market and new product market entry, acquirers' M&A experiences, and managerial hubris, among others (Barkema & Vermeulen, 1998; Hayward & Hambrick, 1997; Hennart & Reddy, 1997; Schweizer, 2005; Vermeulen & Barkema, 2001; Zollo & Singh, 2004).

As mentioned earlier, King et al. (2004) meta-analysis found that these commonly researched variables have little effect on M&A value creation. Cross-border M&A adds more challenges and complexity for management practice and scholarly research because different country institutions in which targets are embedded exert an additional, important yet unfamiliar influence on acquirers' cross-border M&A value creation (Hitt, et al., 2006; North, 1990; Rossi & Volpin, 2004; Scott, 2001). These host country institutions and institutional difference between the home and the host country need to be examined. Indeed, even domestic M&As are significantly affected by their surrounding institutions such as anti-trust regulation in the 1910s and deregulation in the 1990s that triggered M&A waves (Goergen & Renneboog, 2004). I suggest that some of the difficulty in explaining cross-border M&A value creation occurs because of failure

to recognize the underlying and influential forces (i.e., country institutions). Accordingly, I examine how country institutions affect cross-border M&A value creation in this work.

There are two additional important reasons to focus on cross-border M&A value creation in this work. One is that the effects of country institutions on cross-border M&A value creation are more salient than on domestic ones. The other important reason is that cross-border M&A is an increasingly important strategy that firms adopt to participate in the fiercely competitive global market (Bettis & Hitt, 1995; Hitt et al., 2006; *World Investment Report*, 2000).

Institutions and Cross-border M&A Value Creation

One central theme of institutional theory is that a country's institutional environment imposes both constraints and incentives on social actors and social activities embedded within this institutional environment (DiMaggio & Powell, 1983; North, 1990; Scott, 2001). For example, as the agent endowed with a monopoly on the use of force, the government designs "the rules of the game" within the country and with other countries including laws, industry regulation policies, foreign trade policies and FDI policies (e.g., cross-border M&A regulation) among others (Weber, Lassman, & Speirs 1994; Mahmood & Rufin, 2005). These constraints and incentives indeed define possible and productive opportunity sets, which in turn determine the kinds of firms that come into existence through defining relative price (investment and pay-off) to firms. Because of inevitable competition derived from resource scarcity, firms tend to enable strategies to achieve the competitive advantage relative to their rivals in exploiting these opportunities.

A country's institutional environments facilitate and encourage the integration of dispersed knowledge and thus the growth of knowledge stock. As a result, institutions affect knowledge stock including technology, beliefs, and strategic decision making, among others within the country (North, 2005). However, firms within a country may be cognitively constrained by their path-dependent knowledge accumulation and thus are not able to identify new value-creating opportunities that exist beyond their accumulated knowledge stock (Kostova & Zaheer, 1999). They are not able to break from their path-dependent growth pattern dictated by their surrounding institutional environment (North, 2005). Thus, firms are less likely to exploit these new value-creating opportunities, which are however critical for firms to survive in the dynamic competitive global marketplace.

Because institutions across countries are different and provide distinct opportunity sets, firms investing in other countries tend to identify new value-creating opportunities and thus generate new revenue streams (North, 2005; Scott, 2001). Vigorous competition in the domestic and global market further provides incentives for firms to learn new knowledge and explore new value-creating opportunities in foreign countries. So, they are able to increase efficiency and innovation relative to those of rivals (North, 2005). Cross-border M&A is an important value creation strategy for firms to compete in the fiercely competitive global market (Vermeulen & Barkema, 2001).

In addition to bringing new value-creating opportunities, cross-border M&As are external and influential forces that help firms to break from their current development paths to new and valuable ones (Vermeulen & Barkema, 2001). Institutions in which

managers are embedded shape managers' thinking of organizations and market competition, often manifesting as deeply ingrained cognition, and thus shape managers' strategic actions. Institutions further influence organizational ideology, organizational practices, organizational resource arrangement, customers' demands and preferences, and industry networks within the country (Kogut, 1991; Ingram & Simons, 2000; Simons & Ingram, 1997, 2003).

Institutional influences accumulate over time along a historically path dependent trajectory. An example is the strong R&D cooperation between universities and business organizations in Germany (Kogut, 1991). Thus, it is difficult for firms embedded in their institutional environments to initiate a path-breaking change even when these changes are indeed necessary in the dynamic global competitive landscape (Bettis & Hitt, 1995). Fortunately, cross-border M&A can be an influential force that helps to decouple the inertia and direct firms to new value-creating paths.

However, there is a void in scholars' understanding of the effects of institutions on cross-border M&A value creation. Conceptual and empirical research in this area is underdeveloped. Fulfilling this research gap, I examine how institutions in the host country and institutional distance between home and host country affect acquirers' cross-border M&A value creation. Governments inheriting previous institutions (e.g., regulatory institutions, physical infrastructure institutions) and designing new ones are indeed active players in cross-border M&A transactions, particularly in the increasingly global competitive marketplace.

Institutional Control

As economies are increasingly integrated with each other, there is significant competition for survival, position and supremacy in the global economy (Polillo & Guillen, 2005). Research has also shown that FDI is likely to produce positive spillovers on host country economy development in the long run (Moran, 2001; Spencer, 2008). It has been witnessed that many developing countries' governments have been decreasing regulatory restrictions in order to attract FDI. Many governments have also been amending diverse institutions regulatory social and economic activities within the country and with other countries in order to adapt to and to compete in the global economy (Polillo & Guillen, 2005). The increasingly global competition highlights the importance of the government. The theoretical premise of this work is that the government makes choices that give rise to markedly different institutional arrangements regulating social and economic activities within the country and with other countries (North & Thomas, 1973; Scott, 2001; Searle, 1995). Accordingly, I propose institutional control concept suggesting that the government designs and utilizes diverse institutions as instruments to regulate social actors and social activities. Institutional control and diverse institutions that the government utilizes to regulate social actors and social activities are indeed humanly devised constraints that structure political, economic, and social interactions (North, 1991).

Institutional researchers have suggested that institutions consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct) and formal rules (constitutions, laws, property rights) (North, 1991; Scott, 1995). Most institutional

research has utilized three institutional profiles including regulatory, normative and cognitive to theorize institutional environments (Busenitz, Gomez, and Spencer, 2000; Kostova, 1999; Scott, 2001). Busenitz, et al (2000) empirically validated a measure of three entrepreneurship institutional profiles. Research in cognitive psychology has shown that cognitive and normative institutions are domain specific (e.g., entrepreneurship institutional profile) (Abelson & Black, 1986; Busenitz, et al., 2000; Walsh, 1995). Further, different groups in a society do not necessarily share the same values (Colclough, 2005). For example, agency theory suggests that the owners (the principal) of the firms may have different value from managers (the agency) (Jensen, & Meckling, 1976). Even different owners may have varying values (Tihanyi, Johnson, Hoskisson, & Hitt, 2003). While professional funds investors have short term orientation, pension funds investors have long term orientation (Tihanyi, Johnson, Hoskisson, & Hitt., 2003).

As can be seen, normative and cognitive two informal institutions orient toward the collective value within an industry, a professional group and a certain domain. The government's institutional control in this work is collective and yet nationally oriented man-made formal institutions. Like tangible and intangible resources, formal institutions are more visible and informal institutions are less visible (Hitt, Ireland & Hoskisson, 2007). These formal institutions functioning as "isolating mechanisms" and/or "incentive structures" are able to control social actors and social activities within the country and related to other countries (North, 1990; 2005).

Formal Institutions

Drawing upon previous institutional literature, I propose four institutions that form the institutional control within the country. These four institutions are regulatory, economic, physical infrastructure and political institutions (Ghemawat, 2001; Henisz, 2000a; Hitt, et al., 2008; North, 1990; Scott, 2001). These four institutions represent humanly devised constraints to structure political, economic and social interactions within a country and related to other countries (North, 1991). As discussed earlier, these four institutions are formal institutions within a country. On the basis of the assumption that governments use institutions to control social and economic activities, this dissertation focuses on examining these formal institutions. At the same time, this dissertation does not de-emphasize the important effects of informal institutions such as culture. Yet, as formal institutions are the underlying basis of business systems within a country (Jackson & Deeg, 2008), they are expected to affect cross-border M&A value creation directly and considerably.

Regulatory institutions refer to laws (legislative), regulations and government policies (policies) such as trade policies and property rights (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998; Scott, 2001). Policies are the course of action adopted by the government; regulations are rule or other order prescribed by the government; law is a rule of conduct or procedure established by the government. These consist of regulatory institutions within a country and related to other countries. The government utilizes regulatory institutions as an institutional instrument to explicitly describe the rules, and require social actors to conform them. The government also uses

the coercive power to enforce regulatory institutions and other institutions, and make sure that social actors conform to these rules. Based on the use or threat of sanctions, the government supports and/or constrains certain social and economic activities within the country.

Political institutions are also one of the important institutions that the government utilizes to regulate social and economic activities. Differing from regulatory institutions, political institutions function as the enforcement of other institutions including regulatory institutions. Political institutions also reflect the level of discretion and power a government maintains over its citizenry, which is undergirded by the political institutional structure (Henisz, 2000a; Hitt et al., 2008). Political institutional structure refers to collections of rules of behavior, norms, roles, physical arrangements, buildings and archives that are relatively invariant in the face of turnover of individuals, and relatively resilient to the idiosyncratic preferences and expectations of individuals (Spencer, Murtha, & Lenway, 2005).

Political institutions include democratic-oriented and authoritarian-oriented political institutions. A democratic political institutions guarantee the full legal protection of basic political and civil rights of the citizenry in a given polity, and establishes the rules that “define and restrict the powers of governmental authorities” (Landman, 1999). Citizen rights are further protected by the underlying political institutional structure, under which the authority is not able to change policies including citizen political rights and regulatory governance easily. By contrast, individuals’ civil rights and activities are constrained within authoritarian political institutions. And, citizens need to strictly obey

the authority of the government under authoritarian political institutions. Authoritarians also tend to impose their will on the citizens, and control their will and activities. Hence, political institutions are an important institution of controlling social actors and social activities within the country.

The effects of economic factors on firms' FDI have long been a major focus in international business and international management literature (e.g., Hymer, 1976). The government utilizes economic institutions such as the inflation rate and interest rates to control economic activities within a country and with other countries (Beck, Demirguc-Kunt, & Maksimovic, 2005; Fontana & Palacio-vera, 2002). As such, economic institutions are included as one of four important institutions in this work.

Physical infrastructure involves transportation structures that facilitate or constrain moving of strategic and factor resources including products, service, and people within a country (Hitt, et al., 2008). Physical infrastructure institutions represent important man-made physical facilities that structure economic, and social interactions and activities within a country (Ghemawat, 2001). As such, physical infrastructure institutions compose the fourth important institution (Ghemawat, 2001; Hitt et al., 2008). Showing its importance, Ghemawat (2001) stressed that information networks and transportation infrastructures in host countries significantly influence FDI. Isobe, Makino and Montgomery (2000) found that physical infrastructure in host countries affects foreign firm entry timing and technology strategies. There is also evidence that physical infrastructure explains much of the variance in e-commerce activities across countries (Oxley & Yeung, 2001).

Therefore, regulatory, economic and physical infrastructures, and political institutions are the four institutions that the government can use to control social and economic activities within a country and with other countries. In the most recent large empirical institutional study, Hitt and his colleagues found these four important institutions (Hitt, et al., 2008).

These four different institutions may involve different incentive structures and thus encourage different social and economic activities (e.g., knowledge accumulation). For example, political institutions may have their agenda, which is not same as economic institutions. Yet, physical infrastructure may in part represent current political institutions' agenda. For example, the Korean government establishes priorities regarding the development of high-tech industries and thus invests heavily in technological infrastructures such as the internet within the country (Lee, 2003). Therefore, examining the effects of each of these four institutions contributes to an integrated and systematic understanding of the government's institutional control and its impact on acquirers' cross-border M&A value creation. For example, Rossi and Volpin (2004) found that some institutions (e.g., stronger shareholder protection) have stronger effects on firms' M&A activities than other institutions such as accounting standards.

Because firms are embedded in the government's institutional control consisting of these four institutions, these four institutions tend to affect acquirers' cross-border M&A value creation simultaneously. As such, I examine the effects of interaction among these four institutions in the host country on acquirers' cross-border M&A value creation.

Institutional Distance

In addition to institutional control in the host country, I contend that institutional distance between the home and the host country also significantly affects acquirers' cross-border M&A value creation. There is evidence that many firms operate in specific regions of the world rather than in the global market because many firms trying to globalize eventually suffer performance declines (Hitt, et al., 2006a; Maitland, Rose & Nicholas, 2005; Rugman, 2005; Rugman & Collinson, 2005). Frankel and Rose (2000) found that a 1% increase in physical distance leads to a 1.1% decrease in international trade; while colony-colonizer relationship such as Spain's ties with Latin America raises international trade about 900%. Firms appear to encounter higher liability of foreignness (LOF) and thus increase costs when operating in distant markets (Eden & Miller, 2004; Zaheer, 1995).

Distance may motivate firms to invest in distant markets and thus to gain arbitrage rents (Ghemawat, 2003). Cross-border M&As combining firms in different institutional environments allow firms to access different and valuable resources, diverse ways that resources are managed, and thus brings new value to acquirers (post-acquisition combined firm). Cross-border M&As expand the scope of value-creating opportunities and include more opportunities that are not recognized and exploited in domestic markets. Some resources that are currently managed in the host (home) country are made available for utilization under a different set of motivating conditions - the home (host) country. As mentioned earlier, cross-border M&As involving firms from different institutional environments may help to overcome inertia and generate new and even

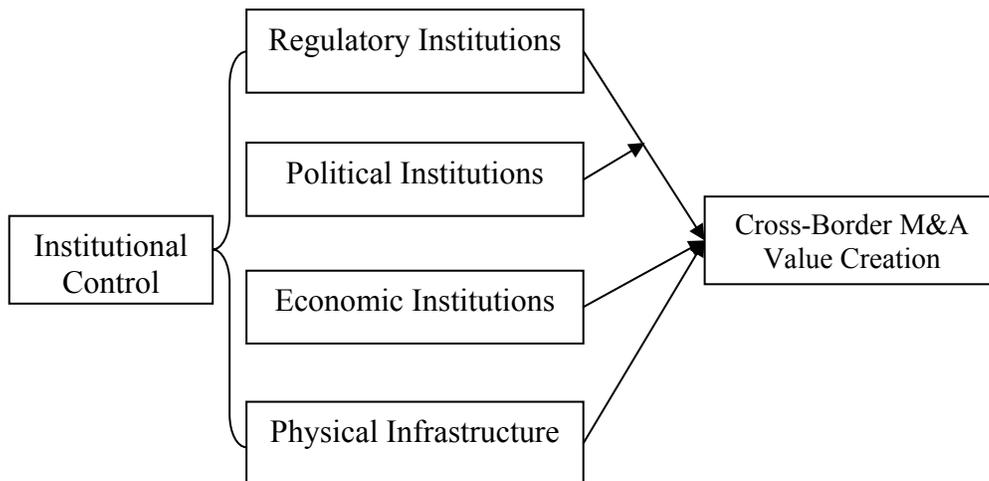
path-breaking value (Kogut, 1991). Institutional distance has profound impacts on acquirers' cross-border M&A value creation.

However, previous research has provided mixed evidence regarding the effects of institutional distance on cross-border M&A value creation (e.g., Ghemawat, 2003; Rugman & Collinson, 2005). I propose the concept of asymmetric institutional distance, which helps to resolve previous mixed findings. Accordingly, I examine the asymmetric effects of institutional distance on cross-border M&A value creation.

Institutional Control and Cross-border M&A Value Creation

Next, I examine main effects of institutions of regulatory, economic, and physical infrastructure in host countries on cross-border M&A value creation. Subsequently, I examine how political institutions in host countries moderate the relationship between regulatory institutions in host countries and cross-border M&A value creation. Figure 1 below illustrates my institutional control and cross-border M&A value creation theoretical model.

FIGURE 1
Institutional Control and Cross-border M&A Value Creation Theoretical Model



Regulatory Institutions

Advanced Regulatory Institutions

As discussed earlier, institutions can act as selection mechanisms that influence economic activities within a country (North, 1990; Potts, 2007). Remarkable improvements in regulatory institutions, such as decreasing regulatory restrictions and providing strong property right protection, usually generate more opportunities for firms

to exploit and thus to create value. For example, the deregulation that occurred in the United States in the 1990s created new investment opportunities for industry, removing long-standing barriers to merging and consolidating (Andrade, Mitchell, & Stafford, 2001).

According to institutional theory, firm behavior is affected by institutional environments (DiMaggio & Powell, 1993; Scott, 2001). Both domestic and foreign firms are likely to respond to the improvement in regulatory institutions by exploiting new market opportunities in these countries. Schaeede (2006) suggested that cross-border M&As in the 21st century have been partially caused by regulatory changes. As foreign firms exploit new market opportunities in these countries, they bring in diverse and different knowledge. As a result, the amount and diversity of knowledge stocks in these countries tend to increase. Valuable and diverse knowledge available in these countries can be a source of value creation for prospective foreign acquirers (Venkataraman, 1997). Firms domiciling in these countries are more likely to generate new products/services, and new production processes by combining these diverse knowledge (Cohen & Levinthal, 1990; Zahra & George, 2002). These firms are valuable targets for prospective foreign acquirers.

Because acquirers' interests tend to be more protected in countries with advanced regulatory institutions (i.e., strong property right protection), knowledge transfer between acquirers and targets is facilitated. Strong property right protection also helps encourage knowledge transfer among firms within a country and thus promotes knowledge acquisition and integration (North, 2005). As a result, acquirers are more

likely to expand their knowledge stocks, which tend to contribute to knowledge creation and thereby value creation.

Property right protection indeed is more important in technology-based industries, particularly those related to e-commerce. Property right protection tends to increase the trust in on-line impersonal transactions and thus enhance the confidence of foreign firms in exploiting huge profitable opportunities in e-commerce markets (Oxley & Yeung, 2001). As firms are also more likely to internalize their intangible assets (on-line business competences), they tend to acquire foreign firms in these countries to exploit these opportunities and thus create value (Capron, 1999; Uhlenbruck, et al., 2006a). As a result, foreign acquirers are more likely to create value through acquiring targets in countries with more advanced regulatory institutions.

Additionally, many countries, particularly emerging economies, have recently liberalized their economies, and are now competing with other countries for the foreign capital and advanced technologies (brought by high-tech firms) necessary for firms to survive in the global marketplace (Tsang & Yip, 2007). Emerging market governments that intend to attract foreign capital and promote economic efficiency and sustain economic growth generally encourage cross-border M&As, selling state assets at below market prices to restructure loss-generating state firms (Tsang & Yip, 2007; Uhlenbruck & Castro, 2000). Uhlenbruck and Castro (2000) found that Eastern European countries tend to sell their higher performing state-owned enterprises (SOEs) to foreign firms for financial resources and advanced technologies. As such, foreign acquirers tend to have

the first-mover advantages in selecting superior resources within a pool of available targets (McNamara, Haleblian, & Dykes, 2008).

Emerging market governments have also recently begun to provide property right protection to attract more foreign investment. As a result, foreign acquirers are likely to create value by acquiring targets in these emerging economies that have been transforming to provide better regulatory institutions for firms to operate.

Less Advanced Regulatory Institutions

Restrictive regulatory institutions considerably decrease valuable business opportunities available for prospective foreign acquirers. For example, some governments expressly intend to protect domestic industries through regulatory control, restricting foreign firms' access to these industries (Ghemawat, 2001). In turn, foreign firms may expect little operation autonomy and thus are less likely to create value within countries with restrictive regulatory institutions (Simons & Ingram, 2003).

For example, while Google acquired firms across countries to establish market power in the global market, acquiring Chinese firms in 2006 has been inhibited because of China's restrictive regulatory institutions (Google milestones, 2006). Even after Google was allowed to operate in China, Google was not able to provide full services to consumers in China and did not create the huge value that was expected. For example, many foreign websites are not allowed access to China.

Restrictive regulatory institutions can significantly decrease acquirers' value creation in the host country and in the global market because valuable information is not accessible in a timely manner for firms operating in countries with restrictive regulatory

institutions. Foreign acquirers are less likely to make fast and effective strategic decisions. Yet, the speed of strategic decision making has emerged as a crucial competitive weapon for firms to compete successfully in a dynamic global business environment (Eisenhardt, 1990). A slow strategic decision process can be as ineffective as implementing the wrong strategy. As time costs, communication costs and transaction costs increase tremendously, acquirers' value creation in host countries with restrictive regulatory institutions is less expected.

Weitzel and Berns (2006) found that while corruption in the host country does not constitute a significant barrier to cross-border M&As, foreign acquirers tend to pay less premiums to the targets in corrupt countries. This also suggests that acquirers tend to perceive less synergy with targets, thereby expecting less value creation by acquiring targets in these countries. Ample evidence shows that firms typically shy away from doing business in countries known for corruption or social conflict (Ghemawat, 2001). Foreign acquirers need to undertake costly preparation to avoid corruption and social conflicts (Hensiz, 2000a). As such, acquirers are less likely to create value by acquiring targets in countries with less advanced regulatory institutions (e.g., restrictive regulatory institutions). In contrast, acquirers can create value by acquiring targets in countries with advanced regulatory institutions (e.g., less restrictive regulatory institutions, strong property rights protection). These arguments lead to the following hypothesis.

Hypothesis 1: There is a positive relationship between the level of regulatory institutions in the host country and cross-border M&A value creation.

Economic Institutions

Since the focus of this dissertation is value creation in cross-border M&As, I define economic institutions in a narrow sense; that is, with reference only to investment constraints, capturing the degree to which money supply is channeled into investments. Economic institutions include a country's inflation rate, liabilities, and liquidity (Hitt et al., 2008). Economic institutions tend to reflect monetary conditions within the country, which affects the level and structure of monetary demand. Specifically, monetary conditions affect the motives, abilities and decisions of economic agents (e.g., firms) to finance productive and speculative activities, and thus influence firm growth (Beck, et al., 2005; Fontana & Palacio-vera, 2002). Cash flow is indeed a necessary condition for financing productive or speculative activity because firms need monetary injections to finance inputs (Beck, et al., 2005). Economic and finance researchers have long posited that the government utilizes macroeconomic tools such as interest rate to influence economic activities within the country (e.g., Taylor, 1993).

Low Levels of Economic Institutions

Researchers have suggested that economic institutions affect prices across a wide variety of markets including financial assets, durable goods and real estate (e.g., Ireland, 2005). Economic institutions affect the development of equity markets, through which firms are able to access abundant financial resources and liquidity (Ireland, 2005). Money tends to reflect its real value in countries with low levels of economic institutions (high levels of investment constraints). As shown in equity markets, the present value of future earning flows tends to be lower in countries with low levels of economic

institutions (Ehrmann & Fratzscher, 2004). Equity markets are depressed in these countries. The connection between equity markets and the rate of capital stock growth is well-established (Ergungor, 2003). Liquidity in these countries is limited to banks subject to licensing and supervision (Hawkins, 2005). Banks also need to have credit standing (Hawkins, 2005).

The key element for the viability and soundness of technological sectors is cash flow. Capital intensive investments in technology industries such as design and component production tend to be limited in countries with low levels of economic institutions (Ehrmann & Fratzscher, 2004). High-tech firms are less likely to develop in these countries because information asymmetry significantly decreases high-tech firms' abilities to obtain external financing (Ng & Schaller, 1996). Foreign acquirers (U.S. acquirers) are likely to evaluate irreversible investments (i.e., cross-border M&As) based on growth opportunities to survive and compete successfully in the global market (Pindyck, 1988). Technology firms, particularly high-tech firms have substantial expected future returns (Ehrmann & Fratzscher, 2004). Obtaining technological know-how and developing technical capabilities are increasingly important motives for cross-border M&As (Ahuja & Katila, 2001). Foreign firms are less likely to acquire targets in these countries. Cross-border M&A value creation is also less expected because value creation is more likely to emanate from technological sectors in the increasingly dynamic global market.

Extremely Low Levels of Economic Institutions

Extremely low levels of economic institutions refer to those economic institutions that are not able to provide funds for firms to invest, and that they even have high foreign debts and need to pay these loans and loan rates. Firms in countries with extremely low levels of economic institutions (high investment constraints) such as Thailand, South Korean and Malaysia firms after the 1990s financial crisis are valuable targets (Baker, Foley, & Wurgler, 2006). Local firms need to sell their assets at any costs to obtain immediate liquidity (Mody & Negishi, 2000). Only foreign firms, largely foreign firms from developed countries are able to afford to buy these firms. Facing this extreme liquid crisis, local firms lost their confidence in their abilities to create value.

Due to such economic cataclysm, local firms also temporarily lost their legitimacy in the eyes of their stakeholders including employees, consumers, community (Kostova & Zaheer, 1999). The lack of confidence of the public in local firms' inability to create value serves to legitimize foreign firms during this period. As a result, almost any foreign firm was immediately perceived as legitimate and capable (Kostova & Zaheer, 1999). Local firms tended to benefit from the legitimate spillovers of foreign acquirers during this period of time.

On the one hand, foreign acquirers bring in financial resources and help to resolve these local firms' liquidity problems. On the other hand, foreign acquirers enlarge the scope and scale of their businesses through the massive scale of purchases of the shares and assets in these countries. Apart from bringing foreign capital, foreign acquirers introduce valuable management knowledge and practices, such as effective capital

structure, efficient management processes, etc. Unlike targets in other countries firms, targets in these countries are usually open to restructuring (Froese, Pak, & Chong, 2007). Hence, foreign acquirers are more able to transfer new managerial, production and marketing resources to targets successfully and thus improve efficiency, promote innovation and create value. As foreign acquirers access new resources (human capital) and different resource management in local markets, foreign acquirers are likely to create value by achieving economies of scale, and combining and recombining resources to create new values.

Rajan and Zingles (1998) point out that investment decisions are less likely to go wrong in situations of extreme capital scarcity relative to available investment opportunities, even with absence of market information. It is usually relatively clear as to which investment would be profitable in situations of extreme capital scarcity. Distressed firms' assets are also more likely to be close to real value (Lewellen & Kracaw, 1987). Thus, foreign acquirers are more likely to create value by acquiring distressed firms in countries with extremely low levels of economic institutions (extremely high investment constraints).

Foreign acquirers may help bridge the gap between these depressed markets and deeper and well-developed foreign financial markets, and thus bring and enforce a capital allocation system with strict and transparent rules and regulations in these host countries (Aguiar & Gopinath, 2005). The greater liquidity and new economic institutional environments brought by foreign acquirers facilitate the trade of ownership of productive technologies and thus promote efficient resource allocation within the

country (Levine & Zervos, 1998). Hence, foreign acquirers are likely to sustain their value creation by acquiring distressed firms in these countries. Additionally, Aguiar & Gopinath (2005) found that the effects of liquidity (e.g., investment constraints) on cross-border M&As are prominent in the tradable sectors such as technological sectors with many potential investment opportunities.

High Levels of Economic Institutions

An expansionary monetary policy tends to encourage the development of equity markets. Firms are also more likely to obtain funding from banks because such expansionary monetary policy would have allowed banks to survive without seriously considering their loan portfolios (Borensztein & Lee, 2002). Liquidity is thus enhanced by allowing broad access to the financial resources (Hawkins, 2005). Abundant external financial resources in turn increase the demand for liquid financial assets (Jackson & Vitols, 2000). As a result, technology sectors requiring intensive capital investments are likely to develop in these countries. Active equity markets in these countries provide firms opportunities to divest resources and to acquire new resources (e.g., productive technologies), which help technological firms build dynamic capabilities to compete successfully in the dynamic global market. Hence, firms in these countries are valuable targets that are likely to contribute significantly to acquirers' value creation.

Equity markets in these countries are likely to offer potentially useful information about firm performance because they summarize the views of market players who have strong incentives to have well informed opinions (Hawkins, 2005). Market prices are also available immediately and are not revised (Hawkins, 2005). While extremely high

information asymmetry exists between acquirers and targets in cross-border M&As, foreign acquirers tend to decrease information asymmetry by acquiring targets in these countries providing transparent and reliable firm information. Hence, foreign acquirers are more likely to identify valuable targets that tend to contribute most to acquirers' cross-border M&A value creation.

The continued development of banking sectors and financial markets in emerging economies, along with the ongoing improvements of regulatory and legal frameworks, have raised expectations of higher investment returns in the future, and thus have driven foreign firms to invest currently against expected future income to achieve inter-temporal substitution (Backe & Wojcik, 2006). This strategy assumes that an investment today may derive its value from the future choices it makes possible. Investment today generates information that is used to help make a subsequent decision (Rivoli & Salorio, 1996). For example, investment in product development gives the firm the alternatives to proceed with manufacturing. As such, current investments serve as a valuable platform that leads to profitable future investments (Rivoli & Salorio, 1996). Expansionary monetary supply associated with lower inflation rate in emerging economies ensures economic stability and thus helps to build the confidence of investors, particularly foreign investors (Backe & Wojcik, 2002). Hence, as foreign firms acquire targets in emerging economies, foreign acquirers are likely to create value in both the short term, and the long term. These arguments lead to the following hypothesis.

Hypothesis 2: There is a U-shaped relationship between the level of economic institutions in the host country and cross-border M&A value creation.

Physical Infrastructure Institutions

Physical infrastructure refers to national transportation infrastructures that facilitate the distribution of goods and services within the country. Seitz and Licht (1995) found that physical infrastructure encourages private investment because firms need access to physical infrastructures such as roads, ports, reliable electricity, telecommunications systems, and the like to obtain needed resources (Carr, et al., 2002). Physical infrastructure also influences transportation costs for products, particularly for low value-to-weight or bulk ratios products, and fragile or perishable products. Firms acquiring targets in these countries are likely to decrease their transaction costs, thereby being more likely to create value. Governments, particularly those of emerging economies have recently invested heavily in physical infrastructure in order to provide more and higher quality physical infrastructures to compete with other countries to attract FDI (Seitz & Licht, 1995). For example, Ireland and South Korean have invested heavily in internet infrastructures in order to attract high-tech FDI (Lee, 2003; Rugman, 2002).

A significant proportion of local outputs of foreign acquirers is intended for local sales (Carr, et al., 2002). Local physical infrastructure thus plays an important role in helping foreign acquirers to create value in local markets. Foreign acquirers need local established distribution networks to capitalize on proprietary technologies in the local

market and to achieve economies of scale. Knowledge-based assets (i.e., technologies) are at least partially joint or public inputs across subunits, giving rise to firm-level scale economies (Carr, et al., 2002).

Local knowledge leakage and imitation provide incentives for firms to gain more benefits from technologies by exploiting economies of scale before their local potential rivals imitate their technologies and to extract profits from them (Isobe, et al., 2000). Local firms have strong incentives to imitate advanced technologies brought by foreign firms. Imitation has been an important technological development foundation for many economies such as Japan in 1960s and Taiwan in 1970s (Orru, Biggart, Hamilton, 1991). Better physical infrastructures such as distribution networks help foreign acquirers achieve such economies of scale faster (Lee, 2003). Accordingly, foreign acquirers tend to attain higher market shares, creating value in local markets (Mitchell, 1991).

Researchers have found that physical infrastructure leads to net increases in economic activities, resulting in economic growth (Chandra & Thompson, 2000). Firms acquiring targets in these countries could further benefit from nearby factor markets and affordable consumers to buy products, thereby being more likely to create value. Physical infrastructures help foreign acquirers to be physically proximate to local customers and thus better understand and satisfy local customers' needs. Foreign acquirers are also more likely to obtain local markets' business information. Information about local customers and local businesses is a valuable resource for foreign acquirers that need adapt to local markets and innovate to compete successfully in the global market (Porter, 1992).

High-quality and dense physical infrastructures further facilitate business information and knowledge transfer (Rangan & Drummond, 2004). Communication and information costs tend to be lower within these countries (Grosse & Goldberg, 1991). Physical infrastructure development further facilitates local technology and human capital development because goods and services derived from advanced technologies are more likely to be brought in these places. Thus, firms in these countries are likely to be valuable targets for foreign acquirers. As foreign acquirers integrate high-quality local distribution networks into their complex networks of production and distribution systems around the world, resource exchange, and information and knowledge transfer between foreign acquirers and local targets is facilitated (Ghoshal & Bartlett, 1990). Foreign acquirers are more likely to create value by acquiring targets in countries with high-quality and supportive physical infrastructure.

However, acquirers tend to incur high costs to distribute goods and services, and to obtain information from distant customers in order to evaluate and monitor geographically distant businesses effectively and in a timely manner in host countries with limited physical infrastructure (Ghemawat, 2003; Ursacki & Vertinsky, 1992; Zhu & Hitt, 2007). Information asymmetry resulting from low-quality physical infrastructure deters transactions within the country and across countries (Ghemawat, 2001). Costs tend to increase exponentially as organizational diseconomies such as coordinating with geographically distant subunits, and monitoring local managers' efforts and service qualities are likely to arise (Berger & Deyoung, 2001; Thomas & Grosse, 2001). Foreign acquirers are even more competitively disadvantaged as they penetrate in geographically

distant and large markets. Therefore, foreign acquirers are less likely to create value by acquiring firms in these countries. Indeed, Carr, et al. (2002) found that low-quality infrastructures make these countries unprofitable locations for production. These arguments lead to the following hypothesis.

Hypothesis 3: There is a positive relationship between the level of physical infrastructure institutions in the host country and cross-border M&A value creation.

Political Institutions

Political institutions refer to the level of discretion and power a government maintains over its citizenry (Hitt et al., 2008). Political institutions also reflect the government's ability to provide a credible commitment to the returns of private investment (Henisz, 2000a). This underlying political structure reflects the ability of a government to craft a credible commitment to an existing policy regime (e.g., regulatory institutions) (Henisz & Zelner, 2006; Hitt, et al., 2006b). I refer to democratic political institutions as providing a high level of civil and political rights to citizenry and making a credible commitment to regulatory institutions, and other institutions. In contrast, I refer to authoritarian political institutions as providing a low level of civil and political rights to citizenry and a low level of commitment to regulatory institutions, and other institutions (Mulligan, Gil, & Martin, 2004). As such, institutions are likely to be stable in countries with democratic institutions and yet change frequently in countries with authoritarian institutions.

As discussed earlier, foreign acquirers are likely to obtain more value-creating

opportunities in countries with high level (e.g., less restrictive) regulatory institutions. Yet, both measurement and enforcement of these regulatory institutions may be imperfect to provide credible commitments to them (North, 1990). Firms may encounter expropriation hazards from the host country government. The host country government may either directly seize assets or adversely change taxes, regulations or other agreements to diminish acquirers' return on assets (Henisz, 2000b). Political institutions enforcing regulatory institutions have its own agenda, differing from the agenda of regulatory institutions (North, 1990). Political institutions that guarantee the government's commitment toward regulatory institutions are needed to ensure the returns to foreign acquirers' investments. Researchers have suggested that the enforcement of regulatory institutions is at least as important as regulatory institutions (Pistor, Raiser, & Gelfer, 2000; Calderon, Chong, & Leo, 2007).

Democratic Political Institutions

Knowledge transfer and knowledge creation. Democratic political institutions encourage continuous trials that lead to value adding discoveries (North, 2005). Firms are more likely to develop new ideas within these countries (Sen, 1999). Firms also desire to exchange knowledge with others that contributes to knowledge creation. They are more likely to establish national intra- and inter- industrial networks to promote knowledge transfer and obtain knowledge spillovers, which tend to contribute to technological innovation and discoveries (Mahmood & Rufin, 2005). There is evidence that the higher density of national networks, the higher interaction among firms and the higher knowledge spillovers within countries such as Germany (Kogut & Walker, 2001).

As discussed earlier, democratic political institutions ensure that the government credibly commits to regulatory, economic, and physical infrastructure institutions. As high-level regulatory institutions provide firms abundant and diverse knowledge stocks and opportunities, and strong property right protection, democratic political institutions facilitate firms' exploitation of these opportunities without fearing the hazards of expropriation and thus create value. Co-existence of high-level regulatory institutions and democratic political institutions provide protection of foreign firms' assets, ensure the returns on private assets and thus decrease contractual hazards among firms. High-level regulatory institutions providing property right protections and democratic and credible political institutions enforcing property right protections are able to ensure and facilitate continuous knowledge transfer within intra- and inter- industry networks. Thus, firms are more able to access and integrate diverse stocks of knowledge, characterized as public goods, externalities and information asymmetry, that tend to contribute to firms' value creation (North, 2005).

Under these regulatory and political institutional environments, acquirers are also more likely to transfer knowledge to targets, and targets in turn tend to acknowledge new ideas and knowledge from acquirers. Knowledge acquisition, integration and creation are facilitated within the combined firm. Foreign acquirers are more likely to create value by acquiring targets in these institutional environments. It is also important to note that the value of targets operating in countries with democratic political institutions is more than an individual value-creating agent. Targets' embedded and dense supporting networks add significant value to target value.

Value added targets. As democratic political institutions guarantee certain social and occasionally economic rights of their citizens, they tend to set a floor to cost competition and thus make economic development based on low cost competition less feasible (Pontusson, 1992; Riain, 2000). In contrast, these countries force firms to move into higher value-added sectors, to pursue higher quality, skill, and productive strategies, and to push firms into new and more dynamic sectors and activities (Pontusson, 1992; Riain, 2000). The number of firms does matter for the technological development of the industry. With an increasing number of technology firms, which exchange knowledge regularly, the number of product innovations increases sharply (Wersching, 2005). Firms in countries with democratic institutions are attractive targets, which tend to enhance foreign acquirers' innovation and thus value creation capabilities in the dynamic global market.

Legitimacy. Guillen (2000) suggested that democratic political institutions that recognize and ensure individuals' political and civil rights are more likely to provide extensive labor rights to employees, and give labor unions a role to play. Unions representing the interests of workers tend to emphasize job security (Schneper & Guillen, 2004). As a method of corporate restructuring to achieve efficiency and profitability, foreign acquirers tend to layoff employees and even the management team of acquired firms, thereby threatening job security of acquired firms. Democratic political institutions fully recognizing labor rights and protecting labor rights by favorable labor legislation boost union's confidence that the job security of employees is ensured and that labors are likely to gain value owing to the entry of profitable foreign

firms (Guillen, 2000; Riain, 2000). Therefore, unions and work forces in countries with democratic political institutions tend to have less hostility toward foreign acquirers. Thus, foreign acquirers are more likely to gain support from labor unions and workforces in general, and are perceived as legitimate players. As legitimate players, foreign acquirers are more likely to obtain needed resources (e.g., skilled labors) and create value that is appreciated by local customers.

Authoritarian Political Institutions

Knowledge transfer and knowledge creation. In contrast, many authoritarian political institutions are not able to provide credible commitments to regulatory, economic, physical infrastructure institutions, and others. Under these political institutions, trust among social actors is deterred. One typical characteristic of authoritarian political institutions is the high level of mistrust it creates in the society. Firms are less likely to exchange information and ideas because they fear other firms will exploit their information and ideas and become their competitors.

Therefore, firms in countries with authoritarian political institutions are less likely to establish trustful innovation networks that foster uninhibited idea exchanges and knowledge spillovers (Mahmood & Rufin, 2005; Porter, 1998). Authoritarian political institutions defined in this dissertation differ from those defined by previous sociological researchers. Henisz and Zelner (2006) found that a few authoritarian countries defined by previous sociological researchers provide stable political institutional environment such as Hungary. In this dissertation I refer to countries with authoritarian political institutions as those with frequent political institutional changes. Political institutions

indeed represent and emphasize the dominant group's interests because politicians are likely to accept offers of financial and electoral resources from special interests groups, and thereby designing and implementing policies that reflect these groups' interests (Mahmood & Rufin, 2005).

Frequent political changes also cause regulatory and other institutions tend to change frequently. As a result, the credibility of regulatory institutions decreases. Foreign firms fearing hazards of expropriation are less likely to, and less able to exploit opportunities and to create value in these countries. Firms entering these countries tend to fear contractual hazards and thus are less likely to exchange knowledge with other firms.

While democratic political institutions facilitate the formation of intra- and inter-industry networks to promote regular knowledge transfer, authoritarian political institutions deter the formation of these value creation networks, inhibiting knowledge transfer within the country (Rummel, 1997). These authoritarian political institutions may even disrupt knowledge spillovers directly (e.g., by limiting internet contacts with the outside world). As a result, while high-level regulatory institutions provide tremendous value-creating opportunities, authoritarian political institutions deter foreign firms to exploit these opportunities and to create value by inhibiting their access to valuable complementary resources and diverse knowledge stocks.

Political hazards. Authoritarian governments tend to control factor resources in their countries (Mulligan, et al., 2004). As firms acquire targets in these countries, they tend to incur additional political costs to obtain legitimacy from political institutions in

order to obtain needed factor resources and thus create value in these countries. As mentioned earlier, the lack of checks and balances on authoritarian political institutions makes cross-border M&As less feasible because foreign acquirers more likely to encounter expropriation hazards from host country governments. This is particularly a serious concern for foreign acquirers that make a strong commitment (i.e., cross-border M&As) in these countries. Even if these foreign acquirers have bargaining powers relative to host country governments, the bargaining advantages largely evaporate as soon as foreign acquirers have made durable and immobile investments in host countries (Henisz, 2000a).

Human capital. As discussed previously, authoritarian political institutions are less likely to provide civil rights to citizens. These authoritarian political institutions are often less likely to invest in workfare programs that provide high quality training to help employees failing in the competitive marketplaces move into employment (Wincott, 2003). Thus, innovative labor forces are less likely to be reproduced in countries with authoritarian political institutions (Riain, 2000). Yet, valuable human capital possessing critical know-how is an important source of firm innovation and value creation (Hitt, Bierman, Shimizu, & Kochhar, 2001). Carr, et al. (2002) found that U.S. outward investment seeks good labor skills and large markets. Obviously, firms in countries with authoritarian political institutions are less attractive targets for foreign acquirers. Cross-border M&A value creation is likely to be lower from acquiring targets in these countries. Thus, these arguments lead the following hypothesis.

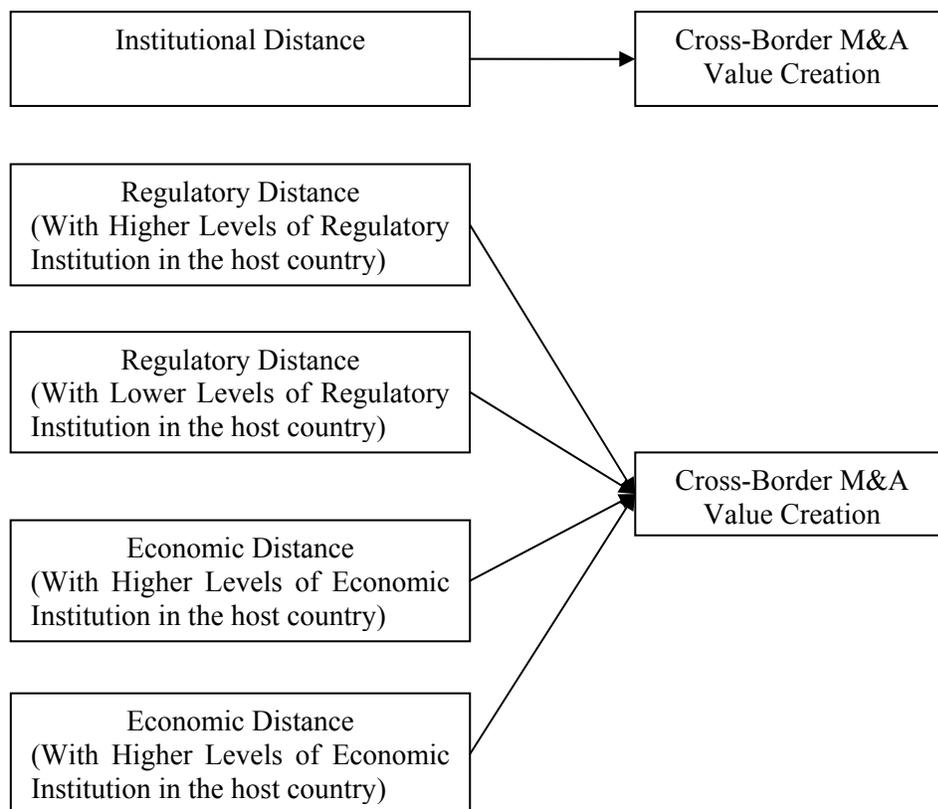
Hypothesis 4: The level of host country political institutions positively moderates the positive relationship between the level of host country regulatory institutions and cross-border M&A value creation.

Institutional Distance

In this section, I first examine the effect of institutional distance on cross-border M&A value creation. Next, I propose asymmetric institutional distance concept. Further, I examine the effects of asymmetric regulatory distance and asymmetric economic distance on cross-border M&A value creation. Figure 2 below presents the theoretical model of the relationship between institutional distance and cross-border M&A value creation.

In addition to institutional control in the host country, I also examine the effect of institutional distance between the host and the home country on cross-border M&A value creation. Distance is an important barrier for which firms must explicitly and thoroughly account when they decide to acquire foreign firms and expect to create value successfully (Ghemawat, 2001). Prior research has focused on the concept of psychic distance encompassing cultural difference, and business factor differences such as legal and competitive environment (e.g., O'Grady & Lane, 1996). Empirical work has focused more narrowly on the concept of cultural distance indices based on Hofstede's work on culture (Tihanyi, Griffith, & Russell, 2005). I examine the effect of institutional distance on cross-border M&A value creation in this work. Further, I propose the asymmetric institutional distance concept, and examine the asymmetric effects of regulatory and economic institutional distance on cross-border M&A value creation.

FIGURE 2
Institutional Distance and Cross-border M&A Value Creation Theoretical Model



Institutional Distance and Cross-border M&A Value Creation

M&A and Value Creation

By prescribing both formal and informal “rules of the game”, institutions guide most interactions among firms, and influence the perceptions of firms regarding which resource combinations and recombinations are possible and productive (North, 1990). Thus, institutions exert powerful inertial forces that tend to encourage firms to manage their resources in ways that follow certain trajectories. Organizational structures, policies, and practices tend to reflect the institutional environment in which they are embedded (Kostova & Zaheer, 1999; Xu, & Shenkar, 2002).

M&As including both domestic and cross-border ones provide a platform for combination of new resources and/or new combinations of existing resources, and thus increase the combined firm’s potential value creation capabilities (Morrow, Sirmon, Hitt & Holcomb, 2007; Nahapiet & Ghoshal, 1998). Firms’ value creation stems from the way resources are managed including structuring the resource portfolio, bundling resources to build capabilities and leveraging capabilities (Sirmon, Hitt, & Ireland, 2007). Resource combinations and recombinations are of greater importance under high environmental uncertainty such as in high-tech industries (Sirmon, et al., 2007). As a result, the way that the combined firms create value through domestic M&As tends to be path-dependent, and thus is less likely to lead firms to generate new rent streams required in the dynamic competitive global market (Sirmon, et al., 2007).

Institutional Distance and Cross-border M&A Value Creation

Fortunately, cross-border M&As involving firms from different institutional

environments help to overcome such inertia and to create new and even path-breaking value (Kogut, 1991). Firms from different institutional environments tend to accumulate varying stocks of knowledge and resources, develop different strategic goals and organizational routines, and are supported by diverse external institutions. Each country's institutional environment representing a different set of "rules of the game" also motivates certain patterns of resource management by its effects on the costs of pursuing varying processes of resource management. Cross-border M&As combining firms from different institutional environments are likely to access diverse resources, and different ways that resources are managed, and thus firms are more likely to create new value. Meanwhile, the scope of value-creating opportunities is broadened through cross-border M&As to include more opportunities that are not recognized and exploited in domestic markets, and resources that are currently managed in the host (home) country are made available for utilization within the firm under a different set of motivating conditions – the home (host) country.

Further, it has been long established in FDI theory that exploitation of location-specific advantages is one of the key motives to invest in foreign countries (Dunning, 1994). A country's institutional environment may be more favorable for certain activities. While firms are most familiar with their domestic institutional environments, this does not necessarily mean that their home institutional environments are most favorable for all kinds of activities. Accessing diverse knowledge stocks in varying institutional environments can be a source of value creation. Firms with expanding resource stocks also tend to secure the best use of their resources within certain institutional

environments (Moran & Ghoshal, 1999). As such, acquirers are likely to create value in institutionally distant markets (i.e., institutional arbitrage).

Single- and Double-loop Learning, and Cross-border M&A Value Creation

Cross-border M&As tend to involve two types of learning – single-loop learning and double-loop learning. Single-loop learning refers to learning external technological knowledge and double-loop learning refers to learning institutional norms and values underlying firms' strategic behaviors (Frynas, Mellahi, & Pigman, 2006; Visser, 2007). Single-loop and double-loop learning occurs when individuals interact with other persons and the contextual institutional environments. While single-loop learning helps firms improve learning outcomes (i.e., new technologies), it places limitation on learning. Single-loop learners do not change their governing values, heuristics and norms during learning processes (Argyris, 1976). However, these governing values and norms may not be consistent with those in the new institutional environment. Single-loop learners may not be able to detect errors and solve problems which are subject to the understanding of new governing rules, heuristics and value (Visser, 2007).

Double-loop learning focusing on exploring new basic values and norms can help single-loop learners overcome single-loop learning limitations, and thus avoid these consequences and function effectively in the new institutional environment (Lei, Hitt, & Bettis, 1996). As a result of single-loop and double-loop learning, acquirers tend to enrich their current knowledge base including advanced technologies and tacit knowledge of doing businesses in foreign markets.

More important, acquirers tend to discover their asymmetries with targets in terms of resources, capabilities, and norms and values underlying resource allocations, R&D investments, and so forth. Knowledge is asymmetrically allocated among economic agents, and knowledge asymmetry lies at the heart of unique value creation (Venkataraman, 1997). It is important to note that knowledge is cumulative and can be transmitted voluntarily or involuntarily without losing any value. Thus, learning allows firms to acquire and accumulate knowledge which is the precondition for generating successful innovation: either to raise productivity through process innovation or to attract new consumer groups with new products through product innovations. As Miller (2003) suggested, firms can conceptualize these asymmetries and leverage them across appropriate market opportunities, turning these asymmetries into sustainable capabilities. In fact, Zahra, Ireland and Hitt (2000) found that learning gained from international environments improve international venture performance (growth and ROE).

Cross-border M&As may act as buying “an admission ticket” for acquirers to navigate in different institutional environments, enabling/motivating more exchanges (i.e., a series of acquisition and divestiture in foreign countries), and discovering potential yet unknown resources and services (Smit, 2001). Cross-border M&As tend to not only divert inertial forces exerted by acquirers’ home institutional environments but also provide more “constructive destruction” value creation opportunities for acquirers.

Identity and Cross-border M&A Value Creation

Identity reflects the degree to which employees of acquirers and targets experience a state of attachment to and identify with the combined firm. Employees who identify with

the firm are likely to share the knowledge and engage more actively in knowledge transfer (Kostova, 1999). Employees are also more likely to acknowledge knowledge transferred. Employees of acquirers and targets partly derive their self-identities from combined organizational membership. Child and Rodrigues (1996) found that knowledge transfer in international joint ventures is facilitated when the partners involved in knowledge transfer hold similar social identities and is impeded when they hold different social identities. Acquirers tend to provide formal integrative mechanisms to facilitate firm-wide learning and thus to achieve competitive advantage (Hansen & Lovas, 2004). The presence of internal formal integrative mechanisms may underscore the common identity that acquirers and targets share, and thus facilitate knowledge transfer between each other (Hansen & Lovas, 2004). Thus, sharing the same identity can offset the negative effects of distance, and can facilitate cooperation between acquiring and target firms.

Challenges Involved in Institutional Distances, and Cross-border M&A Value Creation

While acquirers are likely to create value by acquiring firms in institutionally distant markets, institutional distance poses great challenges for acquirers. Acquirers tend to encounter information asymmetries and liability of foreignness (LOF) when operating in distant institutional environments (e.g., Eden & Miller, 2004). Thus, firms may be less able to realize value creation in distant markets. Although acquirers might benefit from diverse resources and capabilities that targets in distant institutional environments bring, benefits might decrease as institutional distance increases (Gaur & Lu, 2007). Eventually

the challenges might override the benefits of institutional distance that contribute to cross-border M&A value creation.

Acquirers' LOF in host countries is derived from their lack of a deep knowledge of host countries. Distance could be perceived as a proxy for informational deficiencies. The more institutionally distant countries that acquirers enter, the less information they are likely to have with regard to host countries including regulatory, economic, political, and physical infrastructure institutions. Acquirers are also less likely to have a deep understanding of local consumers' needs and preferences. Researchers have recently suggested that firms need to improve consumer benefits and to create value (Priem, 2007). Local consumers lack information to evaluate new entrants from distant markets in terms of their product reliability, quality, etc., and thus they are hesitant to buy their products and/or services. As a result, acquirers incur additional costs to establish their legitimacy and gain acceptance by local constituents when they decide to enter distant markets.

While acquirers are able to access diverse, novel and valuable knowledge from institutionally distant host countries, it is important to note that acquirers' ability to recognize, to assimilate, and to apply novel knowledge to commercial ends is the function of prior related knowledge (Cohen & Levinthal, 1990). High levels of knowledge differences tend to create an almost unbridgeable cognitive gap and hence lower the probability of assimilating different knowledge and thereby of generating technological innovations. Acquirers tend to have more difficulties in understanding and correctly interpreting distant institutional requirements (Kostova & Zaheer, 1999).

Too much institutional distance makes it causally ambiguous for acquirers to figure out how firms in host countries succeed and thus what acquirers need to do to succeed in these host countries. Wuyts, Colombo, Dutta and Nootboom (2004) suggested that optimal learning entails a trade-off between the advantage of a higher novelty value of knowledge, and the disadvantage of less mutual understanding. Hence, the heterogeneity of knowledge should be sufficiently small to allow for understanding but sufficiently large to yield non-redundant, novel knowledge. Wuyts, et al. (2004) suggested that the value of learning has an inverse-U shaped relation with knowledge novelty, with optimum level that yields maximal value of learning.

Researchers have suggested that firms are largely less capable of accessing and deploying required resources to compete successfully in a distance market (Rugman & Verbeke, 2004). Acquirers are likely to suffer performance declines when operating in an institutionally distant country. Prior studies have shown that firms decrease their performance as they locate in a distant market (Berger & Deyoung, 2001; Miller & Parkhe, 2002). For instance, Li and Guisinger (1991) found that foreign-owned affiliates in the United States have a lower survival rate compared to domestic U.S. firms. Rugman and Collinson (2005) also found that firms regionalizing their activities are better able to extract benefits from internationalization than those trying to globalize.

Institutional Similarity and Cross-border M&A Value Creation

Institutional similarity results in similar, hence familiar business procedures such as knowledge about transaction. Institutional similarity facilitates transaction processes, and reduces transaction costs (Nonaka & Takeuchi, 1995). Firms acquiring the target in

a similar institutional environment tend to decrease their transaction costs. Due to institutional similarity, the level of comfort and trust between acquirers and targets is likely to increase, facilitating knowledge transfer and mutual problem solving (Hansen & Lovas, 2004). Acquirers are more able to share superior knowledge within similar institutional environments, and more likely to exploit their competitive advantages in these environments.

As acquirers tend to compete with firms domiciling in similar institutional environments for similar resources and market space, positive benefits of institutional similarity are reduced due to negative competition effects. These negative effects tend to grow rapidly and become dominant. For example, Buckley, Clegg and Wang (2007) found that investment from Hong Kong, Macau and Taiwan multinational enterprises compete fiercely with local Mainland Chinese firms.

Acquirers may be less likely to create value in relatively similar institutional environments because important institutional differences may not be anticipated (e.g., O'Grady & Lane, 1996; Shenkar, 2001). For example, Tsang and Yip (2007) found that hazard rates of FDI are lower in more developed and less developed countries than in countries with similar economic development as the home country. Acquirers from ineffective institutional environments are less able to create value through acquiring targets in similar ineffective institutional environments as they are locked in a situation with less valuable knowledge spillovers (De Groot, Linders, Rietveld, & Subramanian, 2004). These arguments lead the following hypothesis.

Hypothesis 5: There is an inverted-U shaped relation between institutional distance and cross-border M&A value creation.

Asymmetric Institutional Distance

Distance by definition is symmetrical: the distance from point A to point B is identical to the distance from point B to point A. Yet, researchers have suggested that the effects of distance might not be symmetrical (e.g., O'Grady & Lane, 1996; Shenkar, 2001). O'Grady & Lane (1996) found that while U.S. retailers have been successful in Canada, large numbers of Canadian retailers have failed in the United States.

The theory of resource dependency originated with the work of Pfeffer and Salancik (1978), which showed that organizational external resource providers shape the focal firm's behavior because the focal firm's survival hinges on its ability to procure critical resources from its resource providers. Casciaro and Piskorski (2005) reformulated the resource dependence model, suggesting two distinct theoretical dimensions of interdependence. Power imbalance refers to the difference in the power of each actor over the other; and mutual dependence refers to the existence of bilateral dependencies in the relationship, regardless of whether the two actors' dependencies are balanced or imbalanced. They also found that mutually dependent and power balanced firms are more likely to form a merger.

While the acquirer and the target are likely to be mutually dependent, I contend that a power imbalance exists between the acquirer and the foreign target. Resource dependence researchers examine the proportion of the acquirer's needed resources that the target can provide; and the proportion of the target's needed resources that the

acquirer can provide. On the basis of the comparison of these proportions, researchers evaluate resource dependence, and thus power imbalance existing between the acquirer and the target (Casciaro & Piskorski, 2005; Pfeffer & Salancik, 1978).

While it might be easy to evaluate the proportion of needed tangible resources such as financial assets quantitatively, it is much more difficult to quantitatively evaluate the proportion of needed intangible resources, particularly tacit knowledge such as advanced technologies, managerial knowledge, and social norms and value etc. As a result, when resources the acquirer (target) needs from the target (acquirer) are tacit, researchers may not be able to calculate and compare the proportion of needed resources that each provides to the other, and thus assess resource dependence and power imbalance between the acquirer and the target.

However, it might be helpful to recognize distinct types of critical resources that the acquirer needs from the foreign target, and those the target needs from the acquirer. Indeed, critical resources that the acquirer needs differ from those the foreign target needs (Hitt, Dacin, Levitas, Arregle, and Borza, 2000; Steensma, Barden, Dhanaraj, Lyles, & Tihanyi, 2008). For example, Hitt, et al. (2000) found that emerging economy firms emphasize and depend on developed country firms for financial assets, technical capabilities, and intangible assets. This suggests that developed country acquirers tend to have more power over emerging economy targets regarding financial assets, technical capabilities, and intangible assets. Further, Hitt et al. (2000) also found that developed country firms emphasize and depend on emerging economy firms for local market knowledge. This further suggests that emerging economy targets tend to more power

with developed country acquirers regarding local market knowledge. Hitt et al. (2000)'s findings imply that a distinct power imbalance exists between developed country acquirers and emerging economy targets. So, differencing the types of resources that the acquirer and the foreign target need reveals power imbalance existing between the acquirer and the foreign target clearly. Importantly, this power imbalance influences the effects of distance on the acquirer and the foreign target differently and significantly.

In this work, I contend that a distinct power imbalance between the acquirer and the foreign target reflects resource, knowledge and ability difference between the acquirer and the foreign target. As the acquirer and the target are embedded in and affected by their respective institutional environments (North, 1990; Scott, 2001), resources, knowledge and ability difference reflect the difference of home and host country institutional environments (North, 1990; Scott, 2001).

Extending the power imbalance existing between the acquirer and the foreign target, I contend that the power imbalance exists between home country firms and host country firms. Further, due to power imbalance, home country firms tend to emphasize certain institutions, and yet de-emphasize others in host countries. It is important to note that these emphasized host country institutions can provide resources that home country firms need. In the similar vein, I contend that host country firms tend to emphasize certain institutions, and yet de-emphasize others in home countries. It is also important to note that these emphasized home country institutions may be different from those emphasized by home country firms. Further, these emphasized home country institutions can provide resources that host country firms need. For example, U.S. acquirers may

emphasize regulatory and political institutions in China. Indeed, Brouthers and Brouthers (2001) found that political risks in the host country significantly influence U.S. firms' foreign entry strategies (e.g., M&A). In contrast, Zeng and Williamson (2003) suggested that Chinese acquirers may emphasize economic institutions in the United States. It has been observed that Chinese acquirers have recently started to acquire developed country targets in order to move up the learning curve pertaining to technological innovations and product-engineering skills (e.g., Zeng & Williamson, 2003).

It is likely that the above mentioned host country firms acquire home country firms. Power imbalance still exists between these two countries and between these two country firms. But, the direction of power imbalance is different from the point view of the acquirer (U.S. and Chinese acquirer) because acquirers from different countries are likely to pay attention to distinct host country institutions that could provide their needed resources. This directional power imbalance influences asymmetric effects of distance between home and host country on cross-border M&A value creation. So, I propose that the effects of institutional distance are asymmetric (Habib & Zurawicki, 2002; Uhlenbruck, et al., 2006b).

In this work I examine the asymmetric effects of regulatory and economic institutional distance on cross-border M&A value creation (Habib & Zurawicki, 2002; Uhlenbruck, et al., 2006a). As discussed earlier, power imbalance exists between the acquirer and the foreign target. Acquirers tend to pay special attention to certain host country institutions that could provide acquirers' needed resources. Yet, targets may pay

special attention to certain home country institutions that are different from country institutions acquirers emphasize. So, examining one institutional dimension distance (i.e., regulatory, economic institutional distance) could provide a clear understanding of power imbalance between the acquirer and the target.

Focusing on one institutional dimension distance could also reveal the direction of power imbalance from the vantage point of the acquirer clearly. For example, as U.S. firms acquire Chinese firms, they enter a lower level of regulatory governance institutional environment; and yet as Chinese firms acquire U.S. firms, they enter a higher level of regulatory governance institutional environment. As shown in the following, as firms acquire the target in a less regulated institutional environment, regulatory institutional distance tends to affect cross-border M&A value creation negatively. Yet, as firms acquire the target in a more regulated institutional environment, regulatory institutional distance may have an inverted U-shaped relation with cross-border M&A value creation. Examining asymmetric effects of institutional distance for certain institutional dimensions (i.e., regulatory and economic institutions) in this work is the first step to unpack the asymmetric effects of institutional distance on cross-border M&A value creation.

Asymmetric Regulatory Distance and Cross-border M&A Value Creation

Acquirers can capitalize on economies of scale in terms of their organizational practices, gaining rents by exploiting market opportunities in host countries with similar regulatory environments. Acquirers are likely to have different organizational practices from those of targets when home and host country regulatory institutions, representing

local dominant stakeholders' interests (e.g., government or private owners) are different (Kostova, 1999). For example, Orru and colleagues (1991) found that firms in Japan, Taiwan, and South Korea exhibit dissimilar organizational and inter-organizational structures according to different institutional principles. While acquirers are likely to encounter LOF and thus increase their costs of operating in countries with different regulatory institutions, acquirers are likely to benefit from regulatory institutional difference in certain circumstances. I suggest that the effects of regulatory distance on cross-border M&A value creation are not symmetric.

I concur that as regulatory distance becomes larger, acquirers are more likely to encounter LOF and thus increase operating, monitoring costs, etc (Kostova & Roth, 2002). As regulatory distance becomes larger, acquirers are less able to transfer their organizational practices to host countries (Kostova & Roth, 2002). Their organizational practices may even conflict with the local regulatory requirements. Acquirers are likely to encounter legitimacy challenges because they may be perceived as seeking conflicting interests from local stakeholders. Acquirers lacking legitimacy are likely to lose their capabilities to access local resources that are vital for acquirers to survive in host countries. Hence, acquirers need to spend additional costs to establish their legitimacy.

Liberalization in many emerging economies heightens the importance of understanding idiosyncratic regulatory institutions (Hensiz, 2003; Westney, 1993). Firms tend to incur social costs and learning costs due to the unfamiliarity of local regulatory institutions (Hitt, et al., 2004; Hitt, Dacin, Tyler, & Park, 1997; Kostova, 1996). This is the case when firms acquire targets in countries with higher level regulatory institutions

(i.e., less restrictive regulatory institutions). Even worse, constrained by acquirers' previous knowledge and experiences in operating in countries with lower level regulatory institutions (i.e., restrictive regulatory institutions), these acquirers are less capable of providing full-featured integrated services in host countries with higher level regulatory institutions, and to compete with host country firms successfully.

However, this may not be the case when firms acquire targets in countries with lower level regulatory institutions (more restricted regulatory institutions). As firms acquire targets in host countries with lower level regulatory institutions, the benefits of operating in these distant markets may override the costs of LOF (Cuervo-Cazurra & Genc, 2008). This is particularly true when these firms have prior experiences of operating in host countries with lower level regulatory institutions (Perkin, 2006). In recent years, emerging economies (lower level regulatory institutions) have begun to liberalize their economies to imitate developed countries (i.e., higher level regulatory institutions). This is likely to be a long and nonlinear transition process. On the one hand, emerging economies imitate regulatory institutions in developed countries and make changes. On the other hand, they still inherit some legacies from previous regulatory institutions.

As developed country firms acquiring targets in emerging economies, they are still likely to encounter LOF and thus increase their operating, monitoring costs, etc. However, new regulatory institutions changes in emerging economies are similar to those in developed countries. Developed country acquirers are more familiar with these new regulatory institutions than firms in emerging economy firms are. Thus, developed

country acquirers are able to capitalize on their competitive advantage (e.g., rich knowledge and experience of providing full-featured services) in these emerging economies.

Emerging economy countries have also been providing tremendous amounts of prospective opportunities for developed country acquirers to exploit. These benefits significantly override the costs of operating in distant host countries. Developed country firms acquiring targets in emerging economies are also likely to benefit from regulatory institutional distance. Yet, as regulatory distance increases, it is likely that idiosyncratic yet ineffective regulatory institutions still permeate within the host country. As a result, information deficiency and LOF dominate when acquirers operate in very distant regulatory environments (e.g., Eden & Miller, 2004). These arguments lead to the following hypothesis.

Hypothesis 6a: When the level of host country regulatory institutions is lower than that of home country regulatory institutions, there is an inverted U-shaped relation between regulatory distance and cross-border M&A value creation.

Hypothesis 6b: When the level of host country regulatory institutions is higher than that of home country regulatory institutions, there is a negative relation between regulatory distance and cross-border M&A value creation.

Asymmetric Economic Distance and Cross-border M&A Value Creation

As discussed earlier, acquirers are able to replicate their existing business model and thus rely on economies of experience, scale, and standardization to exploit opportunities and create value in host countries with similar economic institutions (Ghemawat, 2001;

Miller & Parkhe, 2002). Acquirers can standardize their technologically advanced products and/or services and achieve economies of scale across similar countries (e.g., Hitt, Hoskisson & Kim, 1997).

Economic Distance Asymmetry

At the same time, it is important to note that the effects of economic distance are not symmetric. For instance, the distance that developed country acquirers face when they acquire targets in emerging economies is not identical with the distance that emerging economy acquirers face when acquiring targets in developed countries. There is evidence that the effects of economic distance on foreign direct investment (FDI) are asymmetric. The World Investment Report (2005) showed that developed market countries made the FDI of 637.4 billions of dollars in other less developed countries in 2004. Yet, emerging market countries made much less FDI (i.e., less than 83.2 billions of dollars) in more developed countries in 2004.

The level of economic institutions is lower in emerging and developing countries than developed countries. As I argue previously, developed countries have mature and active equity markets, and diverse funding channels for firms to obtain financial resources as they need such as seed fund, angel fund (Ireland, 2005). These financial markets not only provide rich financial resources for firms to invest, but also allow firms to invest in risky and yet profitable projects, providing investment service to help firms evaluate the investment project, monitor the investment and thus increase the success rate of investing in risky yet profitable projects. However, equity markets in emerging economies are in the very early stage, and diverse funding channels are less available to

emerging market firms. Banks in emerging economies primarily provide financial resources to state-owned enterprises (SOEs). Other firms need to rely on their own savings, family financial resource, and/or gray financial markets to start their businesses. As such, they are more conservative in their investment. They are less likely to invest in industries that require significant R&D (e.g., high-tech industries, innovations).

Therefore, developed country firms largely possess advanced technological knowledge stocks and worldwide reputations. As developed country firms acquire targets in emerging economies, they tend to bring in advanced technological knowledge, and innovative products/services. Their worldwide reputations as competent and innovative companies also signal their reliability and accountability (e.g., legitimacy) to emerging market consumers, and thus decrease local consumers' uncertainty about their product and service quality and credibility (Podolny, 1994). Developed market firms acquiring emerging and/or developing market firms are likely to increase their knowledge diversity and to build new firm-specific advantages that increase their ability to compete successfully in global markets (Cantwell & Janne, 1999; Kuemmerle, 1999). Hence, cross-border M&As involving acquirers from developed countries and targets from emerging or developing countries are likely to create value.

Research showed that firms in countries with lower level economic institutions prefer acquirers from countries with higher level economic institutions because acquirers from countries with higher level economic institutions bring not only financial capital but also new values, norms, organizational practices, and notions of how business is done (Lowinski, Schiereck, & Thomas, 2004). These values, norms, organizational

practices, and notions of how business is done brought by developed country acquirers have been dominating the competitive global market (Ingram, Robinson, & Busch, 2003). Targets in countries with lower level economic institutions desiring to survive and compete successfully in the global market are receptive to new value, norm and organizational practices brought by acquirers from countries with higher level economic institutions.

The basis of competitive advantage has recently shifted from efficiency based on economies of scale to firms' capabilities for innovation and upgrading skills and technologies (Porter, 1992). Firms from countries with higher level economic institutions have started to acquire targets in countries with lower level economic institutions in order to increase their knowledge diversity and to build new firm-specific advantages that increase their ability to compete successfully in global markets (Cantwell & Janne, 1999; Kuemmerle, 1999). Hence, cross-border M&As involving acquirers from countries with higher level economic institutions and targets from countries with lower level economic institutions are likely to create value. These arguments lead to the following hypothesis.

Hypothesis 7a: If the level of host country economic institutions is lower than that of home country economic institutions, there is a positive relationship between economic distance and cross-border M&A value creation.

However, acquirers from countries with lower level economic institutions generally have fewer resources and are less competent, and thus they may have self-doubts about their capabilities to compete in host countries with lower level economic institutions

(Bartlett & Ghoshal, 2000). Acquirers encounter competitive rivals in host countries with higher level economic institutions, and the experiences of these firms in countries with higher level economic institutions reinforce their self-doubt (Barlett & Ghoshal, 2000). Local potential consumers in countries with higher level economic institutions generally lack information about products and services from countries with lower level economic institutions.

Previous studies have also shown that consumers in countries with higher level economic institutions perceive products and services from countries with lower level economic institutions as low quality, and rank their producers as low status (Aulakh, Kotabe, & Teegen, 2000; Cordell, 1993). Thus, acquirers from countries with lower level economic institutions may not gain legitimacy from host country potential consumers, decreasing their capability to compete successfully in host countries with higher level economic institutions.

While acquirers from countries with lower level economic institutions may benefit from legitimacy spillovers from their targets in countries with higher level economic institutions, they are still less likely to create value in host countries with higher level economic institutions. On the one hand, cross-border M&As are costly for acquirers from countries with lower level economic institutions; on the other hand, these acquirers face fierce competition pressures in countries with higher level economic institutions. Acquirers from countries with lower level economic institutions are also much less resourceful to invest for learning to develop cost-effective and innovative products that sophisticated and demanding consumers in countries with higher level economic

institutions desire. Therefore, cross-border M&As involving acquirers from countries with lower level economic institutions and targets from countries with higher level economic institutions are less likely to create value. These arguments lead to the following hypothesis.

Hypothesis 7b: As the level of host country economic institutions is higher than that of home country economic institutions, there is a negative relationship between economic distance and cross-border M&A value creation.

Summary

This chapter reviewed cross-border M&A value creation, institutions and institutional distance literature, and developed the hypotheses of the effects of institutional control and institutional distance on cross-border M&A value creation.

Specifically, theoretical base section (i.e., section one) reviewed the extant cross-border M&A value creation, institutions and institutional distance literature. New concepts (i.e., institutional control, four institutions including regulatory, economic, physical infrastructure and political institutions and asymmetric institutional distances) were proposed.

In institutional control and cross-border M&A value creation section (i.e., section two), I examined main effects of regulatory, economic and physical infrastructure institutions in the host country on cross-border M&A value creation. I also investigated how host country political institutions moderate the relationship between regulatory institutions and cross-border M&A value creation.

In institutional distance and cross-border M&A value creation section (i.e., section three), I continued developing hypotheses yet put a separate focus on the effects of institutional distance on cross-border M&A value creation. First, I showed an inverted-U shaped relation between institutional distance and cross-border M&A value creation. Second, I proposed asymmetric institutional distance concept. Specifically, I examined the effects of asymmetric regulatory distance and asymmetric economic distance on cross-border M&A value creation.

CHAPTER III

METHODOLOGY

The primary purpose of this chapter is to describe the methodology used to test the hypotheses developed in Chapter II. The important methodological topics discussed herein are: (1) sample; (2) measures of dependent, independent, and control variables; and (3) statistical analysis techniques. I begin with the sample.

Sample

Cross-border M&As

A sample of cross-border M&As are obtained from SDC Thomson's International M&As Database. SDC collates information from over 200 English and foreign language news sources such as SEC filings and the filings from its international counterparts, trade publications, newswire reports, proprietary surveys of investment banks, law firms, other advisory firms, the Wall Street Journal, Reuters, Financial Times and other newspapers, periodicals, and press releases to assemble a robust and comprehensive listing of acquisition activity (Chari, Ouimet, & Tesar, 2004; Uhlenbruck, et al., 2006b). For each transaction, the SDC database provides information about the date on which the transaction was announced and the date on which the transaction became effective. The database also provides some characteristics of acquirers and targets such as name, industry sector, primary SIC classification and nation. Many of the transactions contain transaction-specific information such as the percent of the shares acquired. This database currently represents one of the most comprehensive sources of information on cross-border M&As.

Cross-border M&A transactions in the sample must fulfill the following criteria. First, acquirers and targets must be based in different countries/areas; Second, acquirers and targets must be in one of 50 countries/areas that are in Hitt, et al. (2007)'s institutional database. Country/area names can be found in Appendix A. Third, consistent with the Hitt et al. (2008) institutional data (see institutional environment section below), cross-border M&A announcement dates must be between 1995 and 2003. Fourth, cross-border M&A acquirers need to hold no less than 51 percent of the target after the acquisition, and hold no more than 49 percent of the target before the acquisition (Uhlenbruck, et al., 2006a). Fifth, acquirers have to be publicly listed and thus have reliable stock return data available for calculating acquirers' abnormal return (AR) attributable to cross-border M&A announcements.

Sixth, cross-border M&As must be in technology industries. Target industries were utilized to categorize cross-border M&A industries. I relied on (1) high-technology industry codes provided by Thomson International M&A database; (2) high-technology industry classification provided by Zahra, et al. (2000); and (3) the list of high-technology industries published at the American Electronics Association (AeA) website (See Appendix B) to identify all high-technology targets and thus cross-border M&As. Next, I identified targets that were not in high-technology industries but have technology components. Accordingly, I classified cross-border M&As with these targets as technology cross-border M&As. I described detailed procedures to identify technology cross-border M&As in Appendix C.

Institutional Environment

I relied on Hitt, et al. (2008) institutional dataset to examine the composition and measurement of country institutions. Hitt et al. (2008) institutional dataset includes extensive institutional data on 50 countries/areas for the period of 1995-2003, resulting in 450 country-year observation. Of the 50 countries/areas in the dataset, 22 were located in the continent of Europe, 14 in Asia, 9 in North, South, or Central America, 3 in Africa, and 2 in the continent of Australia. Hitt et al. (2008) uses various sources: Euromonitor International, Index of Economic Freedom (IEF) (Gwartney, Lawson, & Block, 1996), Freedom House's annual survey of political rights and civil liberties, the Political Constraint Index (POLCON) Dataset (Henisz, 2000b), International Country Risk Guide (ICRG), Political Risk Services, World Bank's World Development Indicators (WDI) (World Bank, 2004) and the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project (House, Hanges, Javidan, Dorfman, & Gupta, 2004). The countries/areas selected were included in these datasets. Sampled countries/areas can be found in Appendix A.

Further, I collected (1) acquirers and targets' yearly company financials; (2) acquirers and targets' daily stock return; (3) daily local market return; (4) daily world market return; (5) foreign currency exchange rate; and (6) Taiwan's quarterly bilateral trade from Datastream. Datastream is one of the largest historical numerical financial databases in the world, with data on stock prices, market indices, exchange rates, company financials, etc. Data are available on approximately 170 countries. Moreover, International Monetary Fund (IMF) Direction of Trade Statistics (DOT) database

provided quarterly bilateral trade data for more than 190 countries/areas except Taiwan. So, I obtained the other 49 countries/areas' quarterly bilateral trade data from IMF DOT.

Finally, I consolidated cross-border M&A data, institutional data, company financials, stock return data, foreign currency exchange rate and bilateral trade data. Because SDC Thomson's International M&As Database do not provide datastream codes for all acquirers and targets, acquirers and targets that do not have datastream codes and thus do not have financials and stock return data were removed from the dataset. This yielded an initial sample size 13909 cross-border M&As.

Measures

Dependent Variable

The dependent variable is cross-border M&A value creation. As M&A theorists have consistently encouraged, I employed two distinct measures: cumulative abnormal return (CAR), and Tobin's Q to capture acquirers' post-acquisition performance (Hoskisson & Hitt, 1990; King et al., 2004). While both are market-based measures, CAR captures acquirers' post-acquisition market-based performance in a short period of time (e.g., three weeks), and Tobin's Q captures acquirers' post-acquisition market-based performance in a long period of time (e.g., two years).

CAR

Event study. The most statistically reliable evidence on whether cross-border M&As create value for shareholders comes from event studies. Cross-border M&As commonly involve a huge investment for acquirers to operate in an unfamiliar institutional environment, representing an important event for acquirers and their

shareholders. Similar to transfer pricing regulation change to Japanese firms operating in the United States, investors have both expectations and concerns about acquirers' post-acquisition value creation (Eden, Valdez, & Li, 2004; Shimizu, et al., 2004).

Using event studies, cumulative abnormal stock market return (CAR) around the date of cross-border M&A announcement can be calculated to capture acquirers' value creation from cross-border M&As reliably (Capron, & Pistre, 2002; Nixon, et al., 2004; Miller, Li, Eden, & Hitt, 2008). The majority of existing post-acquisition performance research uses a stock market event study (King, et al., 2004; Shimizu, et al., 2004). Therefore, I utilized the event study to gauge the value that acquirers create from cross-border M&As in this work (Andrade, et al., 2001; Chari, et al., 2004; McWilliams & Siegel, 1997).

Event studies assume that markets are informationally efficient, such that security prices reflect all publicly available information, and price changes reflect new information. Substantial evidence indeed supports the market efficiency argument. If markets were not efficient, they would adjust slowly (or not all) to new information. On the basis of over 100 studies, Elton and Gruber (1987) demonstrated that the market responds rapidly to new information. Further, the typical result in event studies using daily data is that on average, stock prices seem to adjust within a day to event announcements. "Although the evidence is not literally 100 percent in support of the efficient market hypothesis, no proposition in any of the science is better documented." (Jensen, 1988: 26). Thus, ample evidence supports the market efficiency assumption underlying event study methodology.

However, researchers started to challenge the market efficiency assumption in the late seventies and early eighties (Kothari & Warner, 2005). Accordingly, researchers hypothesize and study abnormal performance over a long horizon such as one year or five years following the major event (Kothari & Warner, 2005). Researchers primarily use the buy-and-hold abnormal returns (BHAR) and Jensen-alpha (i.e., calendar-time) approaches to estimate risk-adjusted abnormal performance over a long horizon (Kothari & Warner, 2005; Sorescu, Shankar, & Kushwaha, 2007). Yet, the long-horizon event studies suffer from two critical issues - risk adjustment and expected returns (Kothari & Warner, 2005). How to address these issues and estimate abnormal returns over a long horizon effectively still remains an open question.

Fortunately, the error in calculating abnormal performance due to errors in risk adjustment is likely to be small in short-horizon event studies (Kothari & Warner, 2005). The use of daily data rather than monthly data in short-horizon event studies permits more precise measurement of abnormal returns and more informative studies of announcement effects (Kothari & Warner, 2005). Hence, the importance of an event like a cross-border M&A can be assessed more effectively by short-horizon event studies. So, I adopted the short-horizon event study in this work.

Global event study. Most event studies in the previous two decades have analyzed firms in a single country, usually in the United States (Park, 2004; Uhlenbruck, et al., 2006b). The market model utilized to calculate abnormal returns for firms in the United States has also represented a valid market model to calculate abnormal returns for firms in other countries (Park, 2004). The market model utilized in these event studies takes

into account daily firm stock returns and daily local market return information. The strong assumption of market model is that financial markets are not integrated across countries. So, market model did not take into account of foreign stock market movements in calculating firms' abnormal returns.

However, due to active international trade and foreign direct investment (FDI), stock returns for firms, particularly those involved in international businesses, are significantly affected by both domestic and foreign stock market movements (Park, 2004). This indicates that the assumption underlying the above market model is not valid. Foreign stock movement should be taken into account to calculate a firm's abnormal stock market returns. Applying market model to calculate abnormal returns for firms, particularly those involved cross-border events (i.e., cross-border M&As) may lead to biased analysis results.

Park (2004) expands this market model to a world market model, adding daily global financial market movement and daily foreign exchange rates information. These two factors have been confirmed to have significant and stable impacts on firm stock returns (Beckers, Connor, & Curds, 1996; Bodnar & Gentry, 1993; Miller & Reuer, 1998). This world market model can be used to examine the effects of firms' cross-border strategic actions such as cross-border M&As on their stock market performance. This world market model can also simultaneously analyze firms in multi-countries. Therefore, I followed Park (2004)'s global event study approach, calculating stock price reactions to cross-border M&A announcements in multi-countries simultaneously. A detailed global event study approach can be found in Appendix D.

As mentioned above, I obtained daily firm stock return, daily local market return, daily world market return and daily nominal foreign exchange rates from DataStream. As I obtained nominal foreign exchange rates from Datastream, I followed previous studies and used countries' quarterly top 10 trade partner data to adjust nominal exchange rates to real exchange rates. Countries' quarterly trade data were obtained from International Monetary Fund (IMF) Direction of Trade Statistics (DOT) database and Datastream.

With regard to the event window, I adopted a three-week window which includes 19 days prior to, the day at, and the day following the announcement (Capron & Pistre, 2002; King et al., 2004). As Miller, et al (2008) found, investors in emerging stock markets react to the event earlier because of information leakage and insider trading in these markets. Research findings showed that cross-border M&A information sometimes leaks out to some market participants earlier than to others (Asquith,1983; McNamara, Haleblan, & Dykes, 2008). Thus, more days before the M&A announcement in the estimation window are needed to capture the abnormal return related to information leakage and insider trading related to cross-border M&As in stock markets (Capron & Pistre, 2002; McWilliams & Siegel, 1997).

It is necessary to check if there are country-specific unusual events such as terrorist attacks and sudden political crises within estimation windows. These unusual events might have an impact on the stock price during cross-border M&A event estimation windows (McWilliams & Siegel, 1997). Yet, it requires both time- and cost- intensive work to check all such unusual events in 50 countries/areas over 9 years. Park (2004)

suggested that researchers can employ longer estimation windows as alternatives to reduce the impact of those unusual events. An unusual market movement for a few days tends to be only a small portion of the entire longer estimation period. So, adopting a three-week estimation window in this work also helps to reduce the impact of those unusual events in 50 countries/areas over 9 years.

To control for confounding events, I checked if an acquirer announced multiple cross-border M&As during this three week event window (Shen & Cannella, 2003). These cross-border M&A transactions were removed from the sample (McWilliams & Siegel, 1997; Nixon, et al, 2004). McWilliams and Siegel (1997) has emphasized that researchers need to check and control for confounding effects in event studies. They documented that these confounding events can have impact on the share price during event estimation windows. After checking this confounding effect, the sample size decreases from the initial 13909 to 8231 cross-border M&A transactions.

Tobin's Q

Cross-border M&A value creation is also measured by Tobin's Q. Tobin's Q compares the market value of assets to their replacement cost or book value (Bertrand & Schoar, 2003; Hillman, Shropshire, & Cannella, 2007). It reflects the market's perception of firm's current and potential profitability. Tobin's Q is widely used as a market-based measure of firm long-term performance. So, I obtained acquirers' Tobin's Q at two years after cross-border M&A announcements as the longer term performance measure. As mentioned above, acquirers' market value and book value of assets were obtained from DataStream.

Independent Variables

The key independent variables are regulatory, economic, physical infrastructure and political institutions, and in the host country, and institutional, regulatory and economic distance between the home and the host country.

Regulatory, Economic and Political Institutions and Physical Infrastructure in the Host Country

In the most recent large empirical study, Hitt and his colleagues (2008) found four dimensions of institutional environments. These four dimensions are regulatory, economic, and political institutions and physical infrastructure. Regulatory institutions reflect the level of regulatory governance in supporting business activities within a country. It is measured by contract and property rights, corruption, fiscal burden, foreign investment restrictions, etc (Hitt, et al., 2008). A higher score on regulatory institutions indicates a lower level of regulatory control (i.e., less advanced regulatory institutions).

Economic institutions reflect the level of investment constraints within a country. This is measured by money supply, net reserves, budget balance, etc. The higher score on economic institutions indicates a lower level of investment constraints (Hitt, et al., 2008).

Physical infrastructure institutions reflect the level and quality of physical transportation systems within a country to facilitate business communications and operations. This is measured by density of road network, air transport carriers, distance travelled by air, etc. The higher score on physical infrastructure institutions indicates the

higher level and quality of physical transportation system within the country (Hitt, et al., 2008).

Political institutions reflect the level of discretion and power that a government maintains over its citizenry. This is measured by civil liberties, political rights, political constraints and political restrictions, etc. The higher score of political institutions indicates the more democratic and credible political institutions within a country (Hitt, et al., 2008). Hitt et al. (2008) also demonstrated criterion-related and discriminant validity for these four institutions. Therefore, on the basis of Hitt et al. (2008), I obtained regulatory, economic, physical infrastructure, and political institutions scores to measure these four institutions in host countries.

Institutional Distance

Institutional distance measures the level of institutional environment similarity between the home country and the host country. On the basis of Hitt et al. (2008)'s four institution measures, I obtained the scores of four institutions including regulatory, economic, physical infrastructure and political institutions in the home country. Then I used Euclidean distance to measure institutional distance between the home and host country, incorporating all four institutional dimensions. The following formula is utilized to assess institutional distance:

$$ID_{jh} = \text{SQRT} \left[\sum_{i=1}^4 (X_{ij} - X_{ih})^2 \right]$$

This index measures deviation along four institutional dimensions (i.e., regulatory, economic, physical infrastructure and political institutions) of each host country from

those of the home country. Where X_{ij} stands for the index of the i^{th} institutional dimension and j^{th} host country, ID_{jh} is the institutional difference of the j^{th} host country from the h^{th} home country where h indicates the home country (Kogut & Singh, 1988).

Regulatory Distance

On the basis of Hitt et al. (2008), I obtained regulatory institutions scores for each home and host country. Then, I measured regulatory distance by calculating the absolute regulatory institutions score difference between the home and host country.

Regulatory Distance Asymmetry

I created a regulatory distance asymmetry dummy variable. Regulatory distance asymmetry was coded as 1 when home country regulatory institution score is higher than host country regulatory institutions score. Otherwise, regulatory distance asymmetry was coded as 0.

Economic Distance

On the basis of Hitt et al. (2008), I obtained economic institutions scores for each home and host country. Then, I measured economic distance by calculating the absolute economic institutions score difference between the home and host country.

Economic Distance Asymmetry

I created an economic distance asymmetry dummy variable. Economic distance asymmetry was coded as 1 when home country economic institutions score is higher than host country economic institutions score. Otherwise, economic distance asymmetry was coded as 0.

Control Variables

In order to show that my arguments add value to the literature on post-acquisition M&A value creation, I need to control for other possible explanations. These variables are treated as control variables and discussed below.

Host Country M&A Experience

Haleblian and Finkelstein (1999) found that U-shaped relationship between firm acquisition experiences and acquisition performance, suggesting the influences of acquisition experiences on cross-border M&A value creation. Particularly, firms' acquisition experiences in the focal host country can provide more relevant knowledge about acquiring targets and thus creating value in this host country. Therefore, I included firms' M&A experiences in the focal host country as a control variable. This is measured by acquirers' total number of cross-border M&As within the focal host country in the three-year period prior to the focal cross-border M&A announcement. The data were obtained from SDC Thomson's International M&As Database.

Method of Payment

Two fundamental methods by which acquirers can pay for an acquisition are cash and stock shares (equity). Research showed that managers tend to finance an acquisition with cash if they believe their firms' stock is undervalued, and with equity (i.e., shares of stock) if they believe their firms' stock is overvalued (Hitt, et al., 2001b). Therefore, the use of cash may signal manager expectations that post-acquisition performance will be particularly strong. The methods of payment affect the method of accounting for an acquisition, which has implications for post-acquisition performance (Hitt, et al., 2001b;

King et al., 2004). I created a dummy variable to represent method of payment. Specifically, I coded cash payment as 0; and stock shares (equity) payment as 1. If acquirers use both cash and stock share payments, I coded the dominant method of payment. For example, if the acquirer uses cash to pay 51% of the total cross-border M&A transaction, I coded it as 0. Method of payment was obtained from SDC Thomson's International M&As Database.

Acquirer-to-target Relatedness

Because of potential synergies between acquirers and targets, the market may tend to value related acquisitions more highly than unrelated acquisitions. Previous research showed that firms pursuing related diversification strategies outperform those pursuing unrelated strategies (Haleblian & Finkelstein, 1999; Hitt, Hoskisson, & Kim, 1997).

Following Haleblian and Finkelstein (1999), I employed a continuous measure of relatedness to capture the various degrees of relatedness between acquirers and targets. I assigned greater weight to 4-digit acquirer-target SIC-code matches, followed by 3-digit and then 2-digit matches. Specifically, if any of the SIC codes of the acquirer and target matched, the acquisition was assigned to a 2 at the 2-digit level match, a 3 at the 3-digit level match, and a 4 at the 4-digit level match. If there are no matches, the acquisition was assigned to 1. Acquirers and targets' SIC codes were obtained from SDC Thomson's International M&As Database.

Acquirer Slack

Previous research suggested various potential influences of slack on acquisition performance. Hitt, et al. (1998) argued that with greater amounts of the slack held by the

acquirer, financing is less necessary and debt financing is also less costly and easier to obtain. They also found that slack, in the form of a large amount of available cash or a favorable debt position, is associated with successful acquisitions. Following Haunschild (1993), I measured acquirer slack as Operating income - Taxes - Interest expense - Preferred dividend - Common dividend/Common equity. It was measured at the end of the year before the year of cross-border M&A announcements. Acquirers' financial data were obtained from Datastream.

Acquirer Performance

Research indicated that firms with better financial performance are more likely to achieve acquisition success (Morck, Shleifer, & Vishny, 1990). I computed acquirer performance as ROA value at the end of the year before the year of cross-border M&A announcements. Acquirers' financial data were obtained from Datastream.

Cultural Distance

As discussed earlier, I examine a country's formal institutions in this dissertation. Accordingly, institutional distance in this dissertation refers to the formal institution difference between the home and the host country. A country's culture is a country's informal institutional environment. So, cultural distance is not the component of institutional distance in this dissertation. As previous studies suggested that cultural distance influences acquirers' post-acquisition performance, I control cultural distance in this dissertation.

Cultural distance is defined as the degree to which the cultural norms in one country differ from those in another country (Kogut & Singh, 1988). Tihanyi, et al.

(2005)'s meta-analysis found that cultural distance had a strong positive effect on MNE performance for developed country investments. Researchers also found that cultural differences produce difficulties and challenges for managers, who must invest more time in communication to avoid conflicts and cultural misunderstanding. Findings regarding the effects of cultural distance on MNE performance are mixed in the literature (Tihanyi, et al., 2005). Yet, these prior studies suggested that cultural distance tends to affect M&A performance (Morosini, Shane, & Singh, 1998). I obtained both cultural value and cultural practice scores from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project (House et al., 2004).

Each of cultural value and cultural practice includes nine indicators: (1) institutional collectivism; (2) in-group collectivism; (3) future orientation; (4) gender egalitarianism; (5) humane orientation; (6) performance orientation; (7) power distance; (8) uncertainty avoidance; (9) assertiveness. I measured culture distance in terms of cultural value and cultural practice respectively. I employed Euclidean distance to capture cultural value and cultural practice distances between the home and the host country by the formula below. Then I obtained cultural distance by calculating the average of the cultural value and cultural practice distance.

$$CD_{cp,jh} = \text{SQRT} \left[\sum_{i=1}^9 (X_{ij} - X_{ih})^2 \right]$$

$$CD_{cv,jh} = \text{SQRT} \left[\sum_{i=1}^9 (X_{ij} - X_{ih})^2 \right]$$

$$CD_{jh} = (CD_{cp,jh} + CD_{cv,jh})/2$$

This index measures deviation along nine cultural dimensions mentioned above of each host country from the home country. Where X_{ij} stands for the index of the i^{th} cultural dimension and j^{th} country, $CD_{cp,jh}$ is the cultural practice difference of the j^{th} country from the home country, and h indicates the home country. $CD_{cv,jh}$ is the cultural value difference of the j^{th} country from the home country, and h indicates the home country. CD_{jh} indicates the cultural distance between the home and the host country.

Statistical Analytical Techniques

Event Study Methodology

As discussed above, I employed a global event study methodology to obtain acquirers' abnormal return around the date of cross-border M&A announcements (Park, 2004). Several key research design and implementation issues for the event study also need to be identified (McWilliams & Siegel, 1997; Uhlenbruck, et al., 2006a). First, I had a sufficient sample size to support the normality assumption. Second, I assessed whether there are outliers because event studies are sensitive to outliers.

Third, I utilized a three week estimation window and thus ensured abnormal returns around the date of cross-border M&A announcements were captured. As discussed earlier, this three week estimation window also helps reduce the impact of those unusual market movements, such as terrorist attacks, sudden political crises, and/or natural disasters.

Hierarchical Linear Modeling

In this work, independent variables (i.e., institutions in the host country, and institutional distance between the home and the host country) and one control variable, cultural distance, are at the country level, and other control variables are at the firm level.

Both firm level and country level variables explain acquirers' cross-border M&A value creation. Hierarchical linear modeling (HLM) is appropriate to test the hypotheses. The variance of acquirers' value creation can be partitioned between the country-level and firm-level variables in HLM analysis (Hitt, Beamish, Jackson, & Mathieu, 2007; Hox, 2002; Parboteeah, Hoegl, & Cullen, 2008; Poston, 2002). Standard errors of coefficients are estimated with adjustment for the dependency within level-2 (country) in HLM analysis. Yet, traditional ordinary least-squares (OLS) do not take the dependency into account. The standard errors of the regression coefficient in OLS are generally underestimated (Hox, 2002). Thus, using OLS is likely to result in spuriously significant results. HLM methodology must be employed to analyze the data and thus test the hypotheses appropriately. Level-1 and level-2 HLM equations per hypothesis were presented in Chapter IV. Level 1 included firm-level control variables; and level-2 included country-level predictors and control variables.

Statistical Power, and Level-1 (firm) and Level-2 (country) Sample Size in HLM

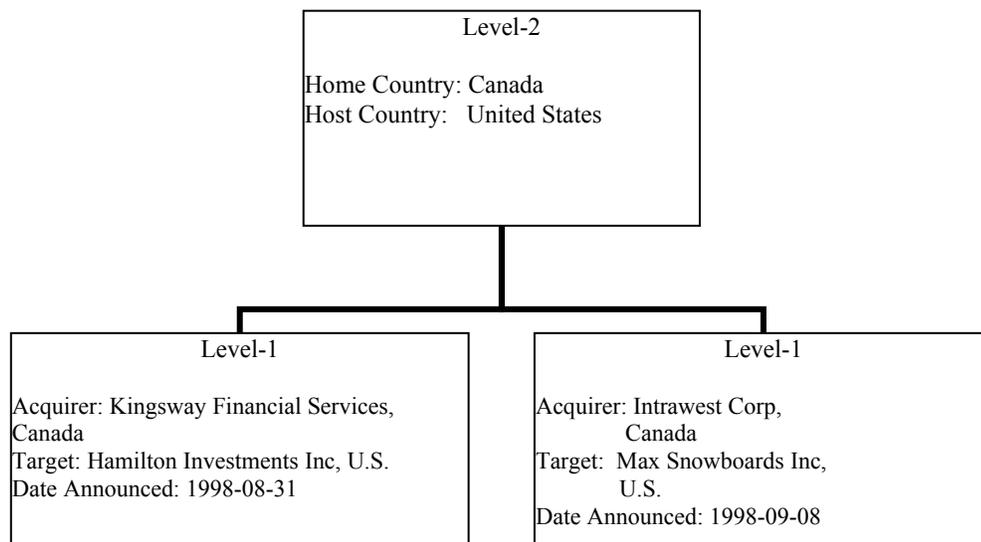
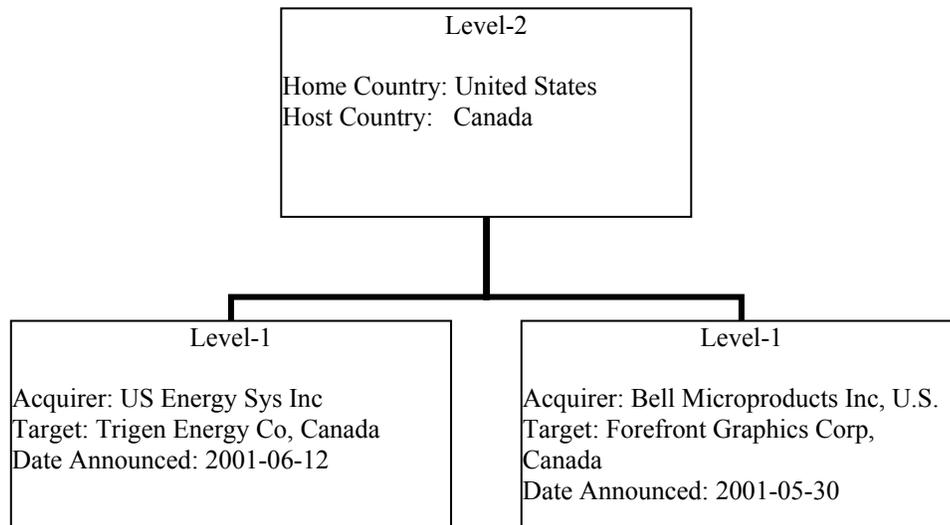
In this work firms (level-1) are nested in countries (level-2) in two-level HLM analysis. Acquirers from the same (home) country acquiring targets in the same (host) country are influenced by the same institutional environment—the same home and host institutional environment. Hence, it is reasonable to assume that cross-border M&As

involved in the same home and host country are correlated with each other. Accordingly, I classified cross-border M&As involved the same home and host country in the same level-2 cluster. I called this level-2 cluster as ordered home-host country dyads in this work. For example, cross-border M&As involved the United States as the home country and Canada as the host country are classified in a different level-2 dyad as those involved Canada as the home country and the United States as the host country. This two-level design is displayed below in Figure 3.

This classification results in 635 home-host country ordered dyads in level-2. Each level-2 dyad has 1 and more than 1 cross-border M&As. Researchers have suggested that the large number of level-2 dyads yields a high power for testing parameters in the model, even if the number of level-1 units per level-2 dyad is very low (Snijders, & Bosker, 1993). Further, Snijders and Bosker (1993) argued that n (i.e., the number of level 1 unit within each level-2 dyad) needs to be bigger than 10 according to their experiences. Bryk and Raudenbush (1992) suggested that a size of larger than 15 may yield a high power for testing parameters in the model. So, ordered home-host country dyads with the number of cross-border M&As less than and equal to 20 were removed from the sample.

Totally 533 ordered home-host country dyads and 2090 cross-border M&A transactions were removed from the sample. This results in 79 ordered home-host country dyads and 6141 cross-border M&As as the final sample size. Acquirers and targets in the final sample size are from 27 countries. These 27 countries could be found in Appendix E.

FIGURE 3
Illustration of Two-level Design



CHAPTER IV

RESULTS

The primary purpose of Chapter IV is to report the results of the hypotheses developed in Chapter II. First, I presented the descriptive and correlation statistics for the sample. Second, I presented the global event study results. Third, the results of null model HLM analysis were reported. Fourth, the results of hypotheses were reported.

Descriptive Statistics

Table 1 presents the descriptive statistics and correlations for level-1 variables. Table 2 presents the descriptive statistics and correlations for level-2 variables. I included dependent variables in both Table 1 and Table 2. Dependent variables include acquirers (1) cumulative abnormal return (CAR) at 19 days prior to, the day of, and one day following cross-border M&A announcements ($CAR_{-19,0,+1}$); (2) Tobin's Q at two years after cross-border M&A announcements (Tobin's Q_2).

Level-1 Descriptive Statistics

Level-1 variables include acquirer ROA, acquirer slack, the relatedness between the acquirer and the target, acquirer M&A experiences in the host country, and the method of payment. These are control variables at the firm level. As mentioned above, I also included two dependent variables in Table 1.

First, consistent with previous research, acquirer ROA is significantly and positively correlated with Tobin's Q_2 (.191, $p < .001$), and $CAR_{-19,0,+1}$ (.040, $p < .01$). Acquirer slack is also significantly and positively correlated with Tobin's Q_2 (.022, $p < .1$), and acquirer $CAR_{-19,0,+1}$ (.098, $p < .001$).

TABLE 1
Descriptive Statistics and Correlations for Level-1 Variables

Level 1 Variables	Mean	s.d.	1	2	3	4	5	6	7
1. ROA	0.083	0.073							
2. Slack	0.272	0.205	.638***						
3. Relatedness	2.875	1.310	.028*	0.024†					
4. Acquirer's experience in the host country	1.121	2.305	-.029*	.076***	-.032*				
5. Methods of Payment	0.290	0.453	.030*	0.006	.058***	0.019			
6. CAR _{19,0,+1}	-0.570	10.441	.040**	0.022†	0.006	-0.004	0.013		
7. Tobin's Q ₂	1.731	0.829	.191***	.098***	.076***	-.041***	-0.001	0.0004	

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

TABLE 2
Descriptive Statistics and Correlations for Level-2 Variables

Level 2 Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Cultural distance	1.699	0.663										
2. Host country regulatory institution	-0.787	0.604	.437***									
3. Host country economic institution	1.013	1.436	-.101***	-.029*								
4. Host country political institution	0.491	0.527	-.378***	-.250***	.201***							
5. Host country physical infrastructure institution	0.091	1.332	.109***	.290***	.448***	.027*						
6. Institutional distance	2.461	1.592	0.025†	.252***	.375***	-0.008	.617***					
7. Economic distance	2.003	1.370	-.143***	.036**	.388***	.209***	.408***	.919***				
8. Regulatory distance	0.531	0.556	.504***	.771***	-.030*	-.470***	.208***	.217***	-.027*			
9. CAR _{9,t+1}	-0.570	10.441	0.004	-0.001	.049***	0.008	.027*	0.012	0.013	-0.014		
10. Tobin's Q _t	1.731	0.829	-.029*	.056***	-0.019	.038**	0.012	.095***	.115***	0.004	0.0004	

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Second, unexpectedly, acquirers' M&A experience in the host country is significantly but negatively related to Tobin's Q_2 (-0.041, $p < .001$). Further, acquirer's M&A experience in the host country is not statistically significantly correlated with acquirer $CAR_{-19,0,+1}$.

Third, while the relatedness between the acquirer and the target is significantly correlated with Tobin's Q_2 (.076, $p < .001$), it is not significantly correlated with acquirer $CAR_{-19,0,+1}$. Further, method of payment is not statistically significantly correlated with acquirer Tobin's Q_2 and $CAR_{-19,0,+1}$.

Fourth, correlation between Tobin's Q_2 and $CAR_{-19,0,+1}$ is not statistically significant. This suggests that Tobin's Q_2 and $CAR_{-19,0,+1}$ are two distinct dimensions of acquirer post-acquisition performance. Further, as shown in the Table 1, the correlation between firm level variables and acquirer Tobin's Q_2 is stronger than the correlation between firm level variables and acquirer $CAR_{-19,0,+1}$. As cross-border M&A announcements are an unanticipated event, CARs capture this unanticipated event, and an abnormal stock price effect associated with it. Stock market investors do not have much information about this cross-border M&A, and do not have much time to digest this "unanticipated" event and anticipate the economic ramifications of this "unanticipated" event at the time around cross-border M&A announcements. Therefore, the short-term nature of event studies may not fully capture economic ramifications of cross-border M&As due to information asymmetries and short-term estimation window (Hitt, Harrison, Ireland, & Best, 1998).

In sum, these results suggested that these firm level variables need to be controlled in analytic models. I also include a table with the scores for each home country for each level-1 independent variables in Appendix F.

Level-2 Descriptive Statistics

Table 2 presents the descriptive statistics and correlations for Level-2 variables. Level-2 variables include regulatory, economic, political and physical infrastructure institutions in the host country, and cultural, institutional, economic and regulatory distance between the home and the host country. These are independent variables and the control variable at level-2 (ordered home-host country dyad) level. I also included two dependent variables in Table 2.

First, regulatory institutions in the host country are significantly and yet positively correlated with acquirer Tobin's Q_2 (.056, $p < .001$). Political institutions are significantly and positively correlated acquirer Tobin's Q_2 (.038, $p < .01$) as expected. Further, institutional distance between the home and the host country is significantly and positively correlated with acquirer Tobin's Q_2 (.095, $p < .001$). Similarly, economic distance between the home and the host country is significantly and positively correlated with acquirer Tobin's Q_2 (.115, $p < .001$). Additionally, cultural distance between the home and the host country is significantly and negatively correlated with acquirer Tobin's Q_2 (-.029, $p < .05$). Yet, regulatory and political institutions, and institutional, economic and cultural distance have no statistically significant correlation with acquirer $CAR_{-19,0,+1}$.

Second, economic institutions in the host country are significantly and positively correlated with acquirer $CAR_{-19,0,+1}$ (.049, $p < .001$). Physical infrastructure institutions in the host country is also significantly and positively correlated with $CAR_{-19,0,+1}$ (.027, $p < .05$). Yet, both have no statistically significant correlation with Tobin's Q_2 . Unexpectedly, regulatory distance between the home and the host country has no statistically significant correlation with $CAR_{-19,0,+1}$ and Tobin's Q_2 .

In sum, institutions in the host country have statistically significant correlations with Tobin's Q_2 and $CAR_{-19,0,+1}$ as expected. Meanwhile, as can be seen in Table 2, when country institutions (e.g., institutions in the host country, and institutional distance between the home and the host country) are significantly correlated with Tobin's Q_2 , they are not statistically significantly correlated with $CAR_{-19,0,+1}$. Further, when country institutions are significantly correlated with $CAR_{-19,0,+1}$, they have no statistically significant correlations with Tobin's Q_2 . This further suggest that Tobin's Q_2 and $CAR_{-19,0,+1}$ are two distinct dimensions of acquirer post-acquisition performance. They also suggest that country institutions and acquirers' cross-border M&A value creation (i.e., Tobin's Q_2 , $CAR_{-19,0,+1}$) are related. I also include a table with the scores for each home country for each level-2 independent variables in Appendix G.

Centering Variables

Table 1 and Table 2 suggested that multicollinearity is not a concern for hypotheses testing. While correlation between host country regulatory institutions, and regulatory institutional distance between the home and the host country is large (.771, $p < .001$), I included each as the dependent variable in different analytical models. Further, the

correlation between institutional distance and economic distance is excessively large (.919, $p < .001$). Yet, each was presented in different analytical models. So, both are not the concern for hypotheses testing.

Further, the inclusion of higher-order (e.g., interaction and polynomial) terms in analytical models can lead to non-essential multicollinearity problem (Aiken & West, 1991; Marquardt, 1980). Non-essential multicollinearity is caused by multiple derivatives of a single independent variable being simultaneously present in a model. Centering variables can reduce non-essential multicollinearity by changing the scaling of the variables. So, I centered the data when including higher-order terms. Moreover, since interaction and curvilinear effects using higher-order terms in this work were tested at level 2 (ordered home-host country dyad), I centered data (level 2) at the grand mean (i.e., the mean across the sample) when including these higher-order terms (Bryk & Raudenbush, 1992; & Cohen, Cohen, West, & Aiken, 2003; Martin, Cullen, & Parboteeah, 2007). I also checked VIF scores for predictors per hypothesis testing carefully. As shown in Table 3, the average of VIF score is 1.677, most VIF scores are far below the cut off of 10, and the maximum VIF score is below the cut off of 10. So, multicollinearity is not a problem.

TABLE 3
VIF Scores

Analytical Models	Average VIF	Minimum VIF	Maximum VIF
Hypothesis 1	1.49	1.01	2.32
Hypothesis 2	1.86	1.01	3.87
Hypothesis 3	1.5	1.01	2.3
Hypothesis 4	1.71	1.01	2.82
Hypothesis 5	1.5	1.01	2.26
Hypothesis 6a	1.44	1.01	1.89
Hypothesis 6b	2.82	1.01	8.73
Hypothesis 7	1.5	1.01	2.4

Global Event Study

Table 4 reported the daily abnormal returns (AR) and the cumulative abnormal returns (CAR) for the sample, as derived from the global event study. Global event study variable names and labels are presented in Table 5.

TABLE 4^a
Daily Abnormal Return (AR) and
Cumulative Abnormal Return (CAR) for Cross-border M&A Announcements

Daily Abnormal Return (AR)				Cumulative Abnormal Return (CAR)			
Event Day	Means	s.d.	t-tests ^b	Event Window	Means	s.d.	t-tests ^b
AR ₋₂₀	-0.031	1.982	-1.252	CAR ₀	0.352	2.578	10.714***
AR ₋₁	-0.016	2.072	-0.617	CAR _{-1,0,1}	0.360	4.029	7.001***
AR ₀	0.352	2.579	10.714***	CAR _{-19,0,+1}	-0.571	10.441	-4.285***
AR ₁	0.024	2.111	0.881	CAR _{-1,0,+19}	-1.190	10.767	-8.660***
AR ₂₀	-0.057	2.014	-2.234*	CAR _{-20,0,+20}	-2.210	16.506	-10.492***

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

^aN = 6141

^bt-test testing the null hypothesis that the mean of abnormal returns is zero

TABLE 5
Global Event Study Variable Name and Label

Variable Name	Variable Label
AR ₂₀	Abnormal return at 20 days prior to cross-border M&A announcements
AR ₋₁	Abnormal return at one day prior to cross-border M&A announcements
AR ₀	Abnormal return at the day of cross-border M&A announcements
AR ₁	Abnormal return at one day after cross-border M&A announcements
AR ₂₀	Abnormal return at 20 days after cross-border M&A announcements
CAR ₀	Cumulative abnormal return at the day of cross-border M&A announcements
CAR _{-1,0,1}	Cumulative abnormal return of one day prior to, the day of and one day following cross-border M&A announcements
CAR _{-19,0,+1}	Cumulative abnormal return of 19 days prior to, the day of and one day following cross-border M&A announcements
CAR _{-1,0,+19}	Cumulative abnormal return of one day prior to, the day of and 19 days following cross-border M&A announcements
CAR _{20,0,+20}	Cumulative abnormal return of 20 days prior to, the day of and 20 days following cross-border M&A announcements

As shown in Table 4, the abnormal return (AR) at the date of cross-border M&A announcement is +0.352 percent, significantly different from zero, with a standard deviation of 2.579 percent. This suggests that the market reacts significantly and positively to the cross-border M&A transaction at the announcement date. Yet, AR_{-1} , AR_1 , and AR_{20} are not statistically significantly different from zero. While AR_{20} is statistically significantly different from zero, AR_{20} is negative (-0.057 percent), with a standard deviation of 2.014 percent.

As shown in Table 4, acquirers achieved statistically significant and positive $CAR_{1,0,1}$ (7.001, $p < .001$). Yet, acquirers achieved statistically significant and negative $CAR_{19,0,+1}$ (-0.571, $p < .001$), $CAR_{-1,0,+19}$ (-1.190, $p < .001$), $CAR_{20,0,+20}$ (-2.210, $p < .001$).

Different Signs of ARs and CARs across Different Event Windows

AR and CAR represents market investors' collective expectation and judgment about cross-border M&A value creation at the time of announcements. Yet, market investors have limited information about cross-border M&As at the date of announcements. Further, due to bounded rationality, market investors are cognitively constrained and thus are not able to process limited available information to predict cross-border M&A value creation at the date of announcements. Research showed that when market investors' information processing capability is exceeded, they are likely to attend to widely-held belief or dominant cognitive heuristics to react to the event in the market (Madhavan & Prescott, 1995; Oler, Harrison & Allen, 2007). For example, Madhavan and Prescott (1995) found that market investors positively react to joint venture announcements based on their heuristic ("joint venture are good news") as joint

venture announcements exceed market investors' information processing capacity. Similarly, as cross-border M&A announcements exceed market investors' information processing capacity, it is plausible that market investors rely on the heuristics ("cross-border M&As are good news") to react cross-border M&As at the date of announcement. As shown in Table 4, AR_0 is statistically significant and positive (.352, $p < .001$). Further, $CAR_{-1,0,1}$ is also statistically significantly positive (.360, $p < .001$). Yet, both AR_{-1} and AR_1 are not statistically significant. This suggests that "trading based on erroneous beliefs makes prices less rational" at the date of cross-border M&A announcements (Fama and French, 2007: 673).

Further, researchers suggested that it takes a long time for market investors to obtain additional information, digest the information, and thus figure out cross-border M&A value creation (Oler, et al., 2007). As can be seen from Table 4, $CAR_{-1,0,+19}$ is statistically significant and negative (-1.190, $p < .001$). This suggests that market investors have processed cross-border M&A related information, and showed their concerns about cross-border M&A value creation after the date of cross-border M&A announcements. Moreover, as suggested by statistically significant and negative AR_{20} (-2.234, $p < .05$), market investors' concerns about cross-border M&A value creation override their positive expectations of cross-border M&A value creation at 20 days after cross-border M&A announcements.

Additionally, as discussed earlier, cross-border M&A information is likely to leak out to some market investors before public cross-border M&A announcements (Banerjee, & Eckard, 2001; Bhattacharya, & Daouk, 2002; Brunnermeier, 2005; Miller, et al.,

2008). Investment bankers, stock traders, and officers of acquirers and targets consist principal inside traders and receive the information prior to public announcements (Banerjee & Eckard, 2001; Brunnermeier, 2005). As these insiders access private and rich information about cross-border M&As, the information help them to predict cross-border M&A value creation rationally. As suggested by statistically significant and negative $CAR_{-19,0,+1}(-.571, p<.001)$, these market investors showed their concerns about cross-border M&A value creation. Market investors' concerns about cross-border M&A value creation are also demonstrated by statistically significant and negative $CAR_{-20,0,+20}(-2.210, p<.001)$.

In sum, global event study results suggest that stock markets react significantly to cross-border M&A announcements.

HLM Null Model

Hypotheses in this work predicted that host country institutions and institutional distance between the home and host country affect acquirers' cross-border M&A value creation. Host country institutions and institutional distance predictors are in level-2 (ordered home-host country dyad); and firm level control variables are in level-1 (firm). For hypotheses to be supported, there must be significant between level-2 (ordered home-host country dyad) variances in the outcome variables. Therefore, I estimated the null model in which no predictors were specified for either level 1 or level 2. The null model is in Table 6.

I estimated the null model for each of two dependent variables. Results of these null models are in Table 7. I examined the significance of between level-2 variance, and intra

class correlation (ICC). ICC indicates the proportion of variance in the outcome variable that resides between level-2 (ordered home-host country) dyads. As indicated by Table 7, between level 2 dyads variances (σ_u) are significant when outcomes are directed each of two dependent variables. Specifically, when outcomes are directed at $CAR_{-19,0,1}$, between level-2 dyads variances is .651 ($p < .001$, $ICC = .004$); when outcomes are directed at Tobin's Q_2 , between level-2 dyads variances is .219, ($p < .001$, $ICC = .068$). These results suggested that important level-2 predictors are needed to explain the outcomes ($CAR_{-19,0,1}$ and Tobin's Q_2). Thus, I can proceed with hypotheses testing by using STATA multilevel modeling.

TABLE 6
Null Model

Level 1

$$Y_{ij} = \beta_{0j} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + U_{0j}$$

Combined

$$Y_{ij} = \gamma_{00} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j 's cross-border M&A value creation

TABLE 7
Results of Null Model

	Model 1	Model 2
	$CAR_{-19,0,+1}$	Tobin's Q_2
Constant	-0.540 ***	1.698 ***
Sigma_u	0.651 ***	0.219 ***
Sigma_e	10.416	0.809
Rho	0.003	0.068

Note: *** $p < 0.001$

Tests of Hypotheses

As discussed in Chapter III, all hypotheses were tested in hierarchical linear modeling (HLM) because independent variables and control variables are in two levels. Independent variables are in country level, and control variables are in firm level. The results of null model testing also suggested that I proceeded with HLM analysis.

Before I proceeded with hypotheses testing, I need to test for potential endogeneity (Hausman, & Taylor, 1981; Shaver, 1998). That is, acquirers may purposely choose host countries to acquire targets. Acquirers expect they are more likely to create value in these host countries based on their resources and capabilities. Under this circumstance, the effects of country institutions on cross-border M&A value creation are conditional on acquirers' resources and capabilities. Yet, the conclusion I want to draw from HLM analyses is that country institutions unconditionally lead to acquirers' cross-border M&A value creation. So, it is necessary to address the endogeneity problem before testing each hypothesis.

A great advantage of two level data is that I can investigate and address this endogeneity problem. The Hausman endogeneity test, called the Durbin-Wu-Hausman test in STATA provides results to address this endogeneity problem (Rabe-Hesketh, & Skrondal, 2005). A statistically insignificant Hausman test indicates that endogeneity problem does not exist, and the model is correctly specified. A random-intercept model should be used to test the hypothesis. A random-intercept model was discussed in detailed in hypotheses testing section. STATA's (software package) XTREG, MLE (procedure) is the appropriate procedure to test the hypotheses. Yet, a statistically

significant Hausman test indicates that endogeneity problem exists and the model is misspecified. Under this condition, a fixed-effects model that only utilizes within level-2 (ordered home-host country dyad) information should be selected to test hypotheses. STATA's (software package) XTREG, FE (procedure) is the appropriate procedure to test the hypotheses.

Control Variables

Table 8 presented the HLM model including control variables. As shown in Table 8, I included firm level control variables in level 1 (firm), and cultural distance is in level 2 (ordered home-host country dyad). I fixed the coefficient of each level-1 firm variable at level 2 ($\beta_{1j}, \beta_{2j}, \beta_{3j}, \beta_{4j}, \beta_{5j}$). There are no level-2 variables predicting them. First, cross-level interaction effects (country institutions*firm variables) are not the main interest in this work. The main interest of this work is to examine the effects of country institutions (level-2) on cross-border M&A value creation. Second, adding level-2 variables predicting these firm level variables would result in many cross-level interaction terms in the combined model. This would cause multicollinearity in analytical models.

Further, the effects of firm level variables (e.g., acquirer slack, ROA) on cross-border M&A value creation vary across their embedded home-host country institutional environments. They do not randomly vary. So, I set the random error term $U_{1j}, U_{2j}, U_{3j}, U_{4j}$, and U_{5j} to be zero. When the random error terms $U_{1j}, U_{2j}, U_{3j}, U_{4j}$, and U_{5j} are set to be zero, this HLM model is called a random-intercept model indicating that only level-1 intercept is randomly varying at level 2; yet level-1 coefficients are not allowed to randomly vary at level 2.

As shown in Table 9, the Hausman test statistic for the control variable model is statistically significant when dependent variables are $CAR_{-19,0,+1}$ ($\chi = 15.65$, $p < .01$) and Tobin's Q_2 ($\chi = 26.51$, $p < .001$). So, fixed effect models were utilized to test control variable models with $CAR_{-19,0,+1}$, and Tobin's Q_2 as dependent variables. Further, a fixed effect model only utilizes within level-2 home-host country dyad information and ignores between level-2 variances. So, care should be taken in interpreting fixed effect results. Results of fixed effect models show how control variables and independent variables affect cross-border M&A value creation within level-2 home-host country dyads.

Table 10 presents the result. As shown in Table 10, acquirer ROA is significantly and positively associated with $CAR_{-19,0,+1}$ (5.846, $p < .05$), and Tobin's Q_2 (2.037, $p < .001$) within home-host country dyads. Relatedness between the acquirer and the target is significantly and positively associated with Tobin's Q_2 (0.038, $p < .001$) within home-host country dyads. Yet, relatedness between the acquirer and the target has no statistically significant correlation with $CAR_{-19,0,+1}$. Further, acquirers' M&A experiences in the host country, and method of payment have no statistically significant association with $CAR_{-19,0,+1}$ and Tobin's Q_2 .

These results demonstrate the importance of controlling for firm-level variables in analytical models. Without these controls, the coefficients would likely present misleading results.

TABLE 8
Control Variable Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j 's cross-border M&A value creation

TABLE 9
Hausman Endogeneity Test: Control Variable Model

	Model 3	Model 4
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	15.65**	26.51***
df	5	5

** p < 0.01

TABLE 10
Control Effects^a

	Model 3 ^b CAR _{-19,0,+1}	Model 4 ^b Tobin's Q ₂
M&A Host experiences	-0.068 (0.063)	-0.000 (0.004)
Method of payment	0.099 (0.316)	-0.026 (0.024)
Relatedness	0.076 (0.103)	0.038 *** (0.007)
Acquirer slack	0.010 (0.871)	-0.093 (0.066)
ROA	5.846 * (2.425)	2.037 *** (0.185)
Cultural distance		
Constant	-1.231** (0.386)	1.484 *** (0.029)
sigma_u	1.469	0.241
sigma_e	10.425	0.796
rho	0.019	0.083
LR Chi square		
F	2.38*	39.86***

^aN=79, n=77.7, N*n=6141

^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Hypothesis 1

Hypotheses 1-4 focus on the effects of the host country institutions on cross-border M&A value creation. To test hypotheses 1-4, I added home country institutions as control variables. The primary reason is to control the effects of home country institutions on cross-border M&A value creation. For example, Giovanni (2002) found that the size of financial markets and the credit provided to the private sector in the home country are significantly related to firms' cross-border M&As.

Hypothesis 1 predicted that there is a positive relationship between the level of host country regulatory institutions and cross-border M&A value creation. As lower score indicates higher level regulatory institutions, I expected there was a negative relationship between host country regulatory institutions and cross-border M&A value creation.

As shown in Table 11, host country regulatory institutions and home country institutions were added in the level-2 HLM analytical model. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice times, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2).

As stated earlier, I did the Hausman endogeneity test of the analytical model before proceeding with hypothesis testing. As shown in Table 12, Hausman statistics is statistically insignificant when dependent variables is Tobin's Q_2 ($\chi=10.64$, n.s.). So, a random-intercept model was utilized to test Hypothesis 1 with Tobin's Q_2 as the dependent variables. The Hausman statistics is statistically significant when dependent variable is $CAR_{-19,0,+1}$ ($\chi=20.14$, $p<.05$). So, a fixed effect model was utilized to test Hypothesis 1 with $CAR_{-19,0,+1}$ as the dependent variable.

Table 13 presents the results. As shown in Table 13, host country regulatory institutions are statistically significantly associated with Tobin's Q_2 . As shown in Figure 4, the relationship is positive (.080, $p<.001$). Similarly, fixed effect model 5 showed that host country regulatory institutions is statistically significantly and positively associated with $CAR_{-19,0,+1}$ (2.149, $p<.01$) within ordered home-host country dyads. These results suggested an opposite relationship between host country regulatory institutions and cross-border M&A value creation as hypothesized in hypothesis 1. So, hypothesis 1 did not receive the support. I discussed this opposite finding in the discussion section.

TABLE 11
Host Country Regulatory Institutions Main Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country regulatory institutions} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country regulatory institutions} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j 's cross-border M&A value creation

TABLE 12
Hausman Endogeneity Test: Hypothesis 1
Host Country Regulatory Institutions Main Effect Model

	Model 5	Model 6
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	20.14*	10.64
df	10	10

*p < 0.05

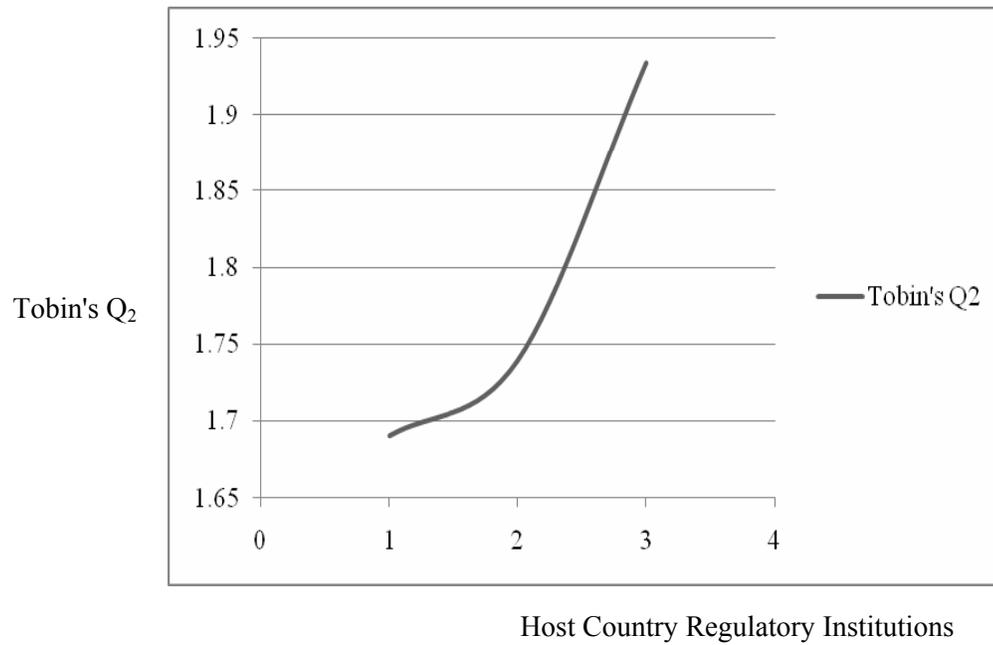
TABLE 13
Hypothesis1 Host Country Regulatory Institutions Main Effect Model

	Model 5 ^b CAR _{-19,0,+1}	Model 6 Tobin's Q ₂
M&A Host experiences	-0.065 (0.063)	-0.000 (0.004)
Method of payment	0.109 (0.316)	-0.024 (0.023)
Relatedness	0.073 (0.103)	0.039 *** (0.007)
Acquirer slack	0.062 (0.872)	-0.089 (0.065)
ROA	5.799 * (2.442)	2.153 *** (0.184)
Cultural distance		-0.050 (0.034)
Home regulatory institutions	-0.350 (1.342)	-0.235 *** (0.057)
Home economic institutions	0.141 (0.507)	.0738 *** (0.014)
Home political institutions	0.944 (1.984)	0.176 ** (0.060)
Home physical infrastructure institutions	-0.154 (0.313)	-0.014 (0.013)
Host regulatory institutions	2.149 ** (0.780)	0.080 ** (0.029)
Constant	-0.612 (2.222)	1.191 *** (0.119)
sigma_u	2.267	0.144***
sigma_e	10.421	0.793
rho	0.045	0.032
LR Chi square		288.83***
F	2.06*	

^aN=79, n=77.7, N*n=6141, ^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

FIGURE 4
Main Effects of Host Country Regulatory Institutions on Tobin's Q_2



Hypothesis 2

Hypothesis 2 predicted that there is a curvilinear relationship between host country economic institutions and cross-border M&A value creation. Acquirers are more likely to create value by acquiring targets in host countries with middle and high level, and extremely low level economic institutions. Yet, acquirers are less likely to create value by acquiring targets in host countries with low level economic institutions. So, I expected a U-shaped relation between host country economic institutions and cross-border M&A value creation.

As shown in Table 14, two variables including host country economic institutions and host country economic institutions squared were added in the level-2 HLM analytical model. Host country economic institutions provides a test of the general linear trend, while host country economic institutions squared provides a test of curvilinearity and the direction of the nonlinear effect. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2).

As stated earlier, I examined Hausman test of the analytical model before proceeding with hypothesis testing. As shown in Table 15, the Hausman statistic is statistically insignificant when the dependent variable is $CAR_{-19,0,+1}$ ($\chi=10.14$, n.s.) So, a random-intercept model was utilized to test Hypothesis 2 with $CAR_{-19,0,+1}$ as the dependent variable. The Hausman statistics is statistically significant when the

dependent variable is Tobin's Q_2 ($\chi=50.69$, $p<.001$). So, a fixed effect model was utilized to test Hypothesis 2 with $CAR_{-19,0,+1}$ as the dependent variable.

Table 16 presents the results. Host country economic institutions is found to positively and significantly associated with $CAR_{-19,0,+1}$ (.634, $p<.001$), while host country economic institutions squared is found to be negatively and significantly associated with $CAR_{-19,0,+1}$ (-.084, $p<.1$). Similarly, the fixed model 8 also showed that host country economic institutions is positively and significantly associated with Tobin's Q_2 (.362, $p<.001$), while host country economic institutions squared is found to be negatively and significantly associated with Tobin's Q_2 (-.048, $p<.001$). These results suggested that when acquirers acquire targets in host countries with low level economic institutions, acquirers are less likely to create value; as acquirers acquire targets in host countries with middle level economic institutions, they are more likely to create value; yet as acquirers acquire targets in host countries with high level economic institutions, they are less likely to create value.

As can be seen in Figure 5, the results suggest that acquirers are less likely to create value by acquiring targets in host countries with high level economic institutions. This is opposite to what I hypothesized. As I hypothesized that acquirers are more likely to create value by acquiring targets in host countries with middle level economic institutions, the results support it. In total, the results partially support hypothesis 2.

TABLE 14
Host Country Economic Institutions Curvilinear Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country economic institutions} + \gamma_{07} \text{ Host country economic institutions squared} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A Experience} + \gamma_{20} \text{ Method of Payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer Slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country Economic institutions} + \gamma_{07} \text{ Host country Economic institutions squared} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j's cross-border M&A value creation

TABLE 15
Hausman Endogeneity Test: Hypothesis 2
Host Country Economic Institutions Curvilinear Effect Model

	Model 7	Model 8
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	10.14	50.69***
df	11	11

*** $p < 0.001$

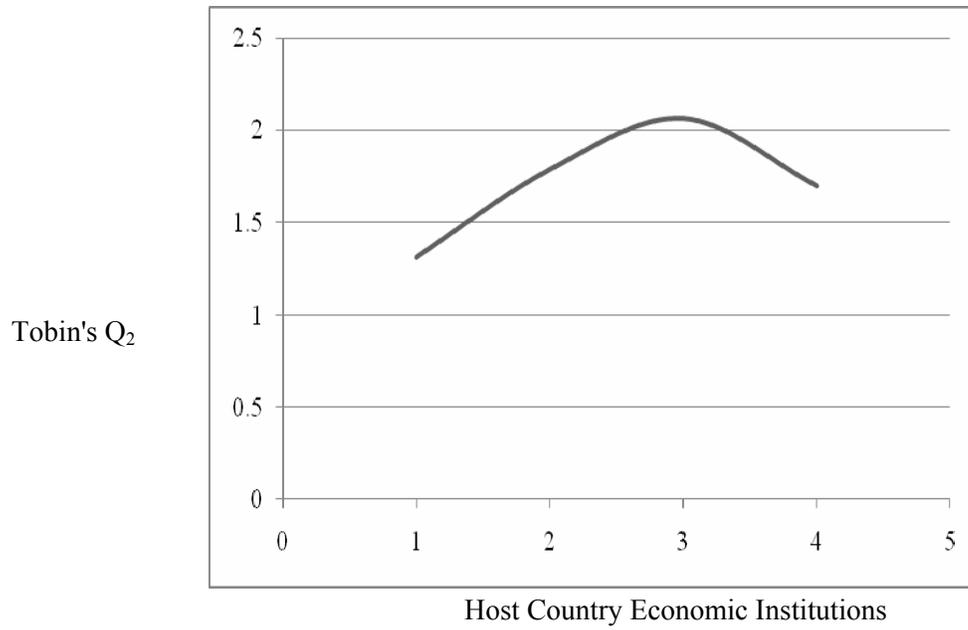
TABLE 16
Hypothesis 2 Host Country Economic Institutions Curvilinear Effect Model

	Model 7	Model 8 ^b
	CAR _{-19,0,+1}	Tobin's Q ₂
M&A Host experiences	-0.092 (0.060)	-0.000 (0.004)
Method of payment	0.124 (0.301)	-0.025 (0.024)
Relatedness	0.037 (0.101)	0.037 *** (0.007)
Acquirer slack	-0.075 (0.851)	-0.077 (0.066)
ROA	6.540 ** (2.392)	2.132 (0.185)
Home regulatory institutions	-1.024 * (0.523)	-0.245 * (0.102)
Home economic institutions	-0.237 * (0.102)	0.131 *** (0.038)
Home political institutions	1.379 ** (0.496)	0.181 (0.151)
Home physical infrastructure institutions	0.043 (0.139)	-0.070 ** (0.024)
Host economic institutions	0.634 *** (0.181)	0.362 *** (0.061)
Host economic institutions squared	-0.084 † (0.047)	-0.048 *** (0.010)
Constant	-3.555 *** (0.981)	0.677 *** (0.168)
sigma_u	0.000	0.366
sigma_e	10.403	0.790
rho	0.000	0.176
LR Chi square	43.89***	
F		27.12***

^aN=79, n=77.7, N*n=6141, ^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

FIGURE 5
Curvilinear Effects of Host Country Economic Institutions and Tobin's Q_2



Hypothesis 3

Hypothesis 3 predicted that there is a positive relation between host country physical infrastructure institutions and cross-border M&A value creation. Acquirers are more likely to create value by acquiring targets in host countries with high level and quality physical support systems.

As shown in Table 17, host country physical infrastructure institutions were added in the level-2 HLM analytical model. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2).

As stated earlier, I did Hausman endogeneity test of the analytical model before proceeding the hypothesis testing. As shown in Table 18, the Hausman statistic is statistically insignificant when dependent variables are $CAR_{-19,0,+1}$ ($\chi=15.71$, n.s.), and Tobin's Q_2 ($\chi=11.86$, n.s.). So, a random-intercept model was utilized to test hypothesis 3.

Table 19 presents the results. As shown in Table 19, host country physical infrastructure institutions is positively and significantly associated with $CAR_{-19,0,+1}$ (.259, $p < .05$). Similarly, host country physical infrastructure institutions is found to be positively and significantly associated with Tobin's Q_2 (.026, $p < .01$). I also tested if there is a curvilinear relationship between host country physical infrastructure institutions and $CAR_{-19,0,+1}$, and between host country physical institutions and Tobin's Q_2 by adding the squared term of host country physical infrastructure institutions. Results show that the squared term of host country physical infrastructure institutions is not statistically significant. These results provide support for hypothesis 3 that there is a linear positive relationship between host country physical infrastructure institutions and cross-border M&A value creation.

TABLE 17
Host Country Physical Infrastructure Institutions Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country physical institutions} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A Experience} + \gamma_{20} \text{ Method of Payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer Slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country Physical infrastructure institutions} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j's cross-border M&A value creation

TABLE 18
Hausman Endogeneity Test: Hypothesis 3
Host Country Physical Infrastructure Institutions Model

	Model 9c	Model 10c
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	15.71	11.86
df	10	10

TABLE 19
Hypothesis 3 Host Country Physical Infrastructure Institutions Model

	Model 9 CAR _{-19,0,+1}	Model 10 Tobin's Q ₂
M&A Host experiences	-0.039 (0.059)	-0.000 (0.004)
Method of payment	0.242 (0.300)	-0.025 (0.023)
Relatedness	0.020 (0.101)	0.038 *** (0.007)
Acquirer slack	-0.076 (0.852)	-0.085 (0.065)
ROA	6.549 ** (2.395)	2.171 *** (0.184)
Cultural distance	0.203 (0.210)	-0.029 (0.034)
Home regulatory institutions	-0.580 (0.508)	-0.239 *** (0.058)
Home economic institutions	-0.334 *** (0.098)	0.085 *** (0.014)
Home political institutions	1.352** (0.498)	0.161 ** (0.061)
Home physical infrastructure institutions	-0.003 (0.152)	-0.029† (0.015)
Host physical institutions	0.259 * (0.114)	0.026 ** (0.009)
Constant	-2.380 ** (0.924)	1.084 *** (0.117)
sigma_u	0.000	0.152***
sigma_e	10.412	0.792
rho	0.000	0.035
LR Chi square	33.03***	288.89***
F		

^aN=79, n=77.7, N*n=6141

^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Note: F test is for fixed effect model, and LR Chi square is for random effect model.

Hypothesis 4

Hypothesis 4 predicted that host country political institutions positively moderate the positive relationship between the level of host country regulatory institutions and cross-border M&A value creation. To test the hypothesis, I added host country political institutions, host country regulatory institutions and the interaction term between host country political institutions and host country regulatory institutions into the model. Specifically, host country regulatory institutions provides a test of the general linear trend across the sample, and the interaction term between host country political institutions and host country regulatory institutions provides a test of moderation and the direction of the moderation.

As shown in Table 20, these three variables were added in the level-2 HLM analytical model. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2).

As stated earlier, I did Hausman endogeneity test of the analytical model before proceeding the hypothesis testing. As shown in Table 21, the Hausman statistic is statistically significant when dependent variables are $CAR_{-19,0,+1}$ ($\chi=32.79$, $p<.001$), and Tobin's Q_2 ($\chi=37.81$, $p<.001$). So, a fixed effect model was utilized to test Hypothesis 4.

Table 22 presents the results. As shown in Model 11, host country regulatory institutions is positively and statistically significantly related with $CAR_{-19,0,+1}$ (4.349, $p<.001$), and the level of political institutions in the host country negatively moderates the positive relationship between host country regulatory institutions and $CAR_{-19,0,+1}$ (-

3.111, $p < .01$). Figure 6 shows the plot of the moderating effects of host country political institutions on the relationship between host country regulatory institutions and $CAR_{19,0,+1}$. As shown in Figure 6, the level of host country political institutions weakens the positive relationship between host country regulatory institutions and $CAR_{19,0,+1}$. These findings are opposite to hypothesis 4. Meanwhile, as can be seen from Figure 6, host country political institutions moderate the relationship between host country regulatory institutions and $CAR_{19,0,+1}$. The general logic of Hypothesis 4 is supported.

Further, the interaction term between host country political institutions and host country regulatory institutions is negatively and statistically significantly associated with Tobin's Q_2 . Figure 7 graphically shows this interaction effect. The level of host country political institutions positively moderates the negative relationship between host country regulatory institutions and Tobin's Q_2 . That is, acquirers are more likely to create value by acquiring targets in countries with higher level regulatory institutions than by acquiring targets in countries with lower level regulatory institutions. Further, this relationship is strengthened in host countries with high level political institutions. These findings support hypothesis 4.

TABLE 20
Host Country Regulatory and Political Institutions Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country regulatory institutions} + \gamma_{07} \text{ Host country political institutions} + \gamma_{08} \text{ Host country regulatory institutions* Host country political institutions} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined Model

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Home country regulatory institutions} + \gamma_{03} \text{ Home country economic institutions} + \gamma_{04} \text{ Home country political institutions} + \gamma_{05} \text{ Home country physical infrastructure institutions} + \gamma_{06} \text{ Host country regulatory institutions} + \gamma_{07} \text{ Host country political institutions} + \gamma_{08} \text{ Host country regulatory institutions* Host country political institutions} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j 's cross-border M&A value creation

TABLE 21
Hausman Endogeneity Test: Hypothesis 4
Host Country Political and Regulatory Institutions Effect Model

	Model 11	Model 12
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	32.79***	37.81***
df	12	12

*** $p < 0.001$

TABLE 22
Hypothesis 4 Host Country Regulatory and
Political Institutions Effect Model

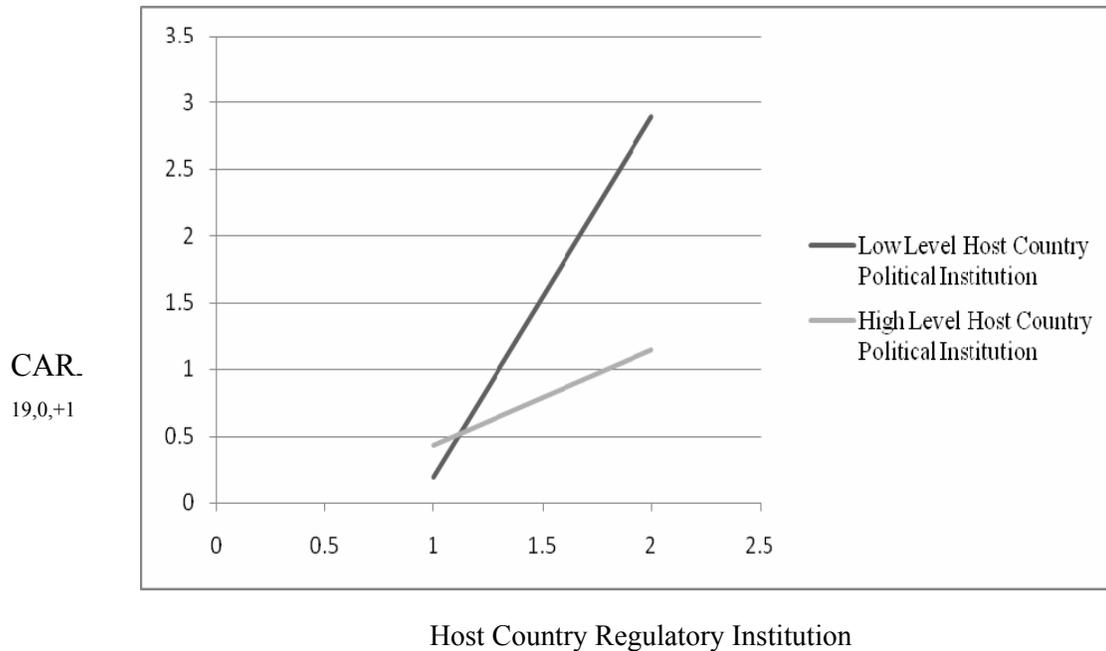
	Model 11 ^b CAR _{-19,0,+1}	Model 12 ^b Tobin's Q ₂
M&A Host experiences	-0.063 (0.063)	-0.000 (0.004)
Method of payment	0.087 (0.316)	-0.026 (0.024)
Relatedness	0.079 (0.103)	0.037 *** (0.007)
Acquirer slack	0.023 (0.871)	-0.075 (0.066)
ROA	5.495* (2.441)	2.112 *** (0.185)
Home regulatory institutions	-0.773 (1.350)	-0.282 ** (0.102)
Home economic institutions	0.102 (0.515)	0.153 *** (0.039)
Home political institutions	1.071 (1.983)	0.249 (0.150)
Home physical infrastructure institutions	0.038 (0.331)	-0.081 *** (0.025)
Host regulatory institutions	4.349 *** (1.174)	-0.079 (0.089)
Host political institutions	-2.225 * (0.976)	0.253 *** (0.074)
Host economic institutions squared	-3.111 ** (1.147)	-0.457 *** (0.087)
Host political institutions *	1.475 (2.484)	0.602 *** (0.188)
Constant	1.475 (2.484)	0.602 *** (0.188)
sigma_u	7.531	0.457
sigma_e	10.412	0.791
rho	0.343	0.250
F	2.77***	24.26***

^aN=79, n=77.7, N*n=6141, ^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

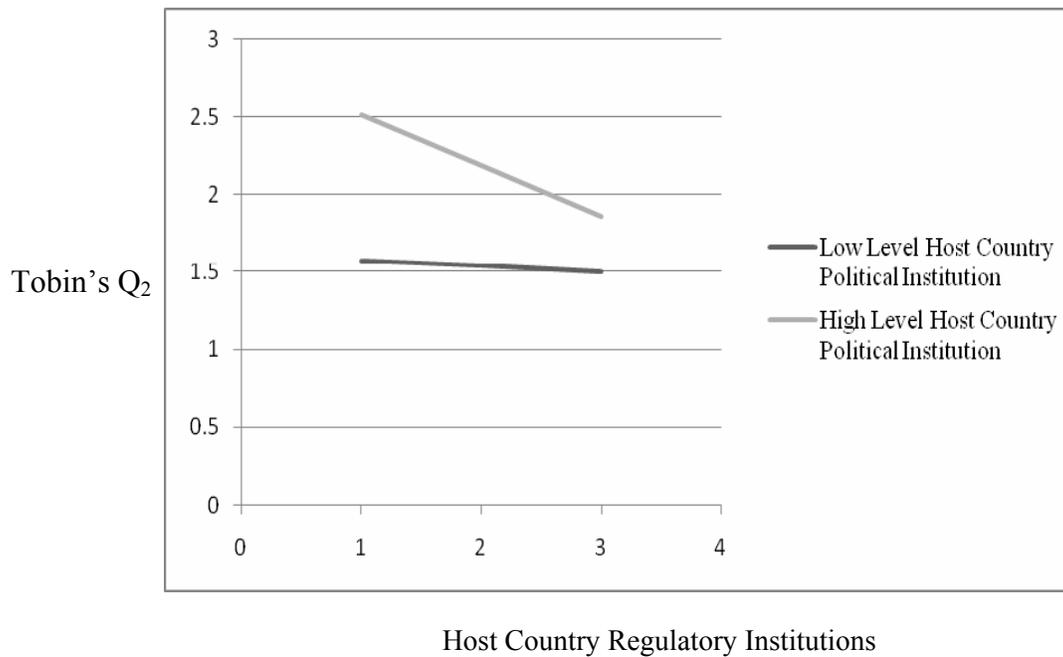
Note: F test is for fixed effect model, and LR Chi square is for random effect model.

FIGURE 6
Moderation Effects of Host Country Political Institutions on the Relationship
between Host Country Regulatory Institutions and CAR_{-19,0,+1}



Note: Low score of regulatory institutions indicates high level of regulatory institutions

FIGURE 7
Moderation Effects of Host Country Political Institutions on the Relationship
between Host Country Regulatory Institutions and Tobin's Q₂



Note: Low score of regulatory institutions indicates high level of regulatory institutions

Hypothesis 5

Hypothesis 5-7 focuses on the effects of institutional distance between the home and the host country on cross-border M&A value creation. To test hypotheses 5-7, I just included control variables. I did not include home and host country institutions as control variables because the institutional distance variable includes the information about home and host country institutions. So, including home and host country institutions in analytical model would cause multicollinearity problems in testing the effects of institutional distance on cross-border M&A value creation.

Hypothesis 5 predicted that there is a curvilinear relationship between institutional distance and cross-border M&A value creation. Acquirers are less likely to create value in similar institutional environments, and more likely to create value in distant institutional environments. Yet, their cross-border M&A value creation decreases as they enter too distance institutional environment. As shown in Table 23, institutional distance and institutional distance squared were entered in the level-2 HLM analytical model. Institutional distance provides a test of the general linear trend, while institutional distance squared provides a test of nonlinearity and the direction of that nonlinearity.

As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2).

As stated earlier, I did the Hausman endogeneity test of the analytical model before proceeding the hypothesis testing. As shown in Table 24, the Hausman statistic is statistically significant when dependent variable is $CAR_{-19,0,+1}$ ($\chi=21.3$, $p<.01$), and Tobin's Q_2 ($\chi=21.76$, $p<.01$). So, a fixed effect model was utilized to test Hypothesis 5.

Table 25 presents the results. As shown in model 13, the relationship between institutional distance and $CAR_{-19,0,+1}$ is positive and statistically significant (.521, $p<.05$), and the relationship between institutional distance squared and $CAR_{-19,0,+1}$ is negative and statistically significant (-.109, $p<.10$). Similarly, as shown in model 14, the relationship between institutional distance and Tobin's Q_2 is positive and statistically significant (.111, $p<.05$), and the relationship between institutional distance squared and Tobin's Q_2 is negative and statistically significant (-.017, $p<.001$). These suggest that there is an inverted-U relationship between institutional distance and $CAR_{-19,0,+1}$, and between institutional distance and Tobin's Q_2 . So, hypothesis 5 is supported.

TABLE 23
Institutional Distance Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Institutional distance} + \gamma_{03} \text{ Institutional distance squared} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Institutional distance} + \gamma_{03} \text{ Institutional distance squared} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j's cross-border M&A value creation

TABLE 24
Hausman Endogeneity Test: Hypothesis 5
Institutional Distance Effect

	Model 13	Model 14
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	21.3**	21.76**
df	7	7

** p < 0.01

TABLE 25
Hypothesis 5 Institutional Distance Effect Model

	Model 13 ^b CAR _{-19,0,+1}	Model 14 ^b Tobin's Q ₂
M&A Host experiences	-0.065 (0.063)	0.000 (0.004)
Method of payment	0.091 (0.316)	-0.028 (0.024)
Relatedness	0.071 (0.103)	0.037 *** (0.007)
Acquirer slack	0.083 (0.871)	-0.073 (0.066)
ROA	6.108 ** (2.431)	2.127 *** (0.184)
Cultural distance		
Institutional distance	0.520 * (0.232)	0.111 *** (0.017)
Institutional distance squared	-0.109 † (0.064)	-0.017 *** (0.004)
Constant	-2.264 *** (0.590)	1.245 *** (0.044)
sigma_u	1.597	0.229
sigma_e	10.42	0.792
rho	0.022	0.077
LR Chi square		
F	2.47*	37.06***

^aN=79, n=77.7, N*n=6141

^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Note: F test is for fixed effect model, and LR Chi square is for random effect model.

Hypothesis 6a

Hypothesis 6a predicts that when the level of host country regulatory institutions is higher than that of home country regulatory institutions, there is a negative relationship between regulatory distance and cross-border M&A value creation. Hypothesis 6b predicts that when the level of host country regulatory institutions is lower than that of home country regulatory institutions, there is an inverted U-shaped relationship between regulatory distance and cross-border M&A value creation. Hypothesis 6a and 6b suggest that the effects of regulatory distance on cross-border M&A value creation is not symmetric.

As shown in Table 26, regulatory distance, regulatory distance asymmetry dummy variable, and the interaction term between regulatory distance and regulatory distance asymmetry were entered in the level-2 HLM analytical model to test hypothesis 6a. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2).

As stated earlier, I did a Hausman endogeneity test of the analytical model before proceeding the hypothesis testing. As shown in Table 27, the Hausman statistics is statistically significant when the dependent variable is $CAR_{-19,0,+1}$ ($\chi=19.45$, $p<.05$), and Tobin's Q_2 ($\chi=30.58$, $p<.001$). So, a fixed effect model was utilized to test Hypothesis 6a. Table 28 presents the results. As shown in Table 28, hypothesis 6a received supported from the results in model 15 with $CAR_{-19,0,+1}$ as the dependent variable. Regulatory distance was positively and significantly associated with $CAR_{-19,0,+1}$ (1.453, $p<.10$), and regulatory distance asymmetry negatively moderates the positive relationship between regulatory distance and $CAR_{-19,0,+1}$ (-3.004, $p<.05$). As shown in Figure 8, when the level of host country regulatory institutions is higher than that of home country regulatory institutions, there is a negative relationship between regulatory distance and $CAR_{-19,0,+1}$. Yet, model 16 did not support hypothesis 6a. While regulatory distance is negatively and statistically significantly associated with Tobin's Q_2 (-.106, $p<.10$), the interaction term between regulatory distance and regulatory distance asymmetry has no statistically significant association with Tobin's Q_2 . In total, hypothesis 6a received the support from model 15 with $CAR_{-19,0,+1}$ as the dependent variable; and yet did not receive the support from model 16 with Tobin's Q_2 as the dependent variable.

TABLE 26
Asymmetric Regulatory Distance Main Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of Payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Regulatory distance} + \gamma_{03} \text{ Regulatory distance asymmetry} + \gamma_{04} \text{ Regulatory distance* Regulatory distance asymmetry} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Regulatory distance} + \gamma_{03} \text{ Regulatory distance asymmetry} + \gamma_{04} \text{ Regulatory distance* Regulatory distance asymmetry} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer firm j 's cross-border M&A value creation

TABLE 27
Hausman Endogeneity Test: Hypothesis 6a
Asymmetric Regulatory Distance Main Effect Model

	Model 15 CAR _{-19,0,+1}	Model 16 Tobin's Q ₂
Chi-square	19.42*	30.58***
df	8	8

*** $p < 0.001$ * $p < 0.05$

TABLE 28
Hypothesis 6a Asymmetric Regulatory Distance Main Effect Model

	Model 15 ^b CAR 19,0,+1	Model 16 ^b Tobin's Q ₂
M&A Host experiences	-0.070 (0.063)	-0.000 (0.004)
Method of payment	0.097 (0.316)	-0.025 (0.024)
Relatedness	0.071 (0.103)	0.038 *** (0.007)
Acquirer slack	0.048 (0.871)	-0.095 (0.066)
ROA	5.808 * (2.426)	2.033 *** (0.185)
Cultural distance		
Regulatory distance	1.453 † (0.834)	-0.106 † (0.063)
Regulatory distance asymmetry	-1.277 (0.789)	0.049 (0.060)
Regulatory distance squared		
Regulatory distance*	-3.004 * (1.425)	0.127 (0.108)
Regulatory distance asymmetry		
Regulatory distance squared*		
Regulatory distance asymmetry		
Constant	-1.871 *** (0.570)	1.537 *** (0.043)
sigma_u	1.885	0.265
sigma_e	10.423	0.796
rho	0.031	0.099
LR Chi square		
F	2.1*	25.29***

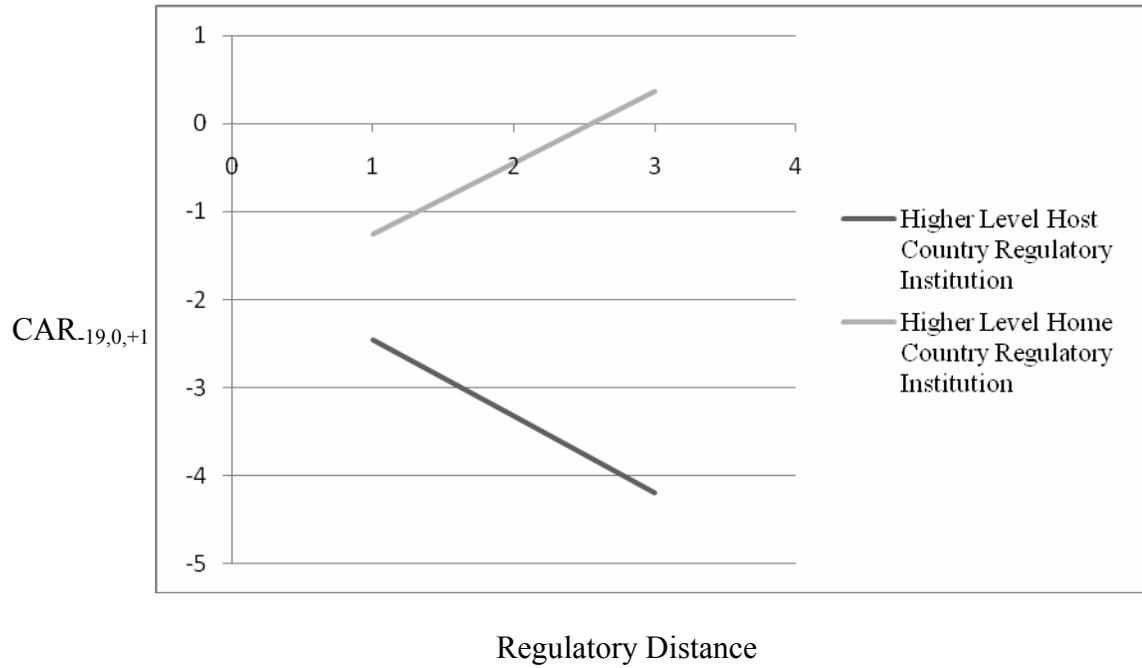
^aN=79, n=77.7, N*n=6141

^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Note: F test is for fixed effect model, and LR Chi square is for random effect model.

FIGURE 8
Moderation Effects of Regulatory Distance Asymmetry on the Relationship
between Regulatory Distance and $CAR_{-19,0,+1}$



Hypothesis 6b

As discussed earlier, hypothesis 6b predicts that when the level of host country regulatory institutions is lower than that of home country regulatory institutions, there is an inverted U-shaped relationship between regulatory distance and cross-border M&A value creation. As shown in Table 29, regulatory distance, regulatory distance asymmetry dummy variable, regulatory distance squared, the interaction term between regulatory distance and regulatory distance asymmetry, and the interaction term between regulatory distance squared and regulatory distance asymmetry were entered in the level-2 HLM analytical model to test hypothesis 6b. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2). As stated earlier, I did a Hausman endogeneity test of the analytical model before proceeding the hypothesis testing. As shown in Table 30, a Hausman statistic is statistically significant when the dependent variable is $CAR_{-19,0,+1}$ ($\chi=30.82$, $p<.001$), and Tobin's Q_2 ($\chi=33.5$, $p<.001$). So, a fixed effect model was utilized to test Hypothesis 6b.

Table 31 presents the results. As shown in model 17 with $CAR_{-19,0,+1}$ as the dependent variable, the interaction term between regulatory distance squared and regulatory distance asymmetry is statistically significant (-11.743, $p < .001$). Figure 9 graphically shows this moderation interaction effect. When the level of host country regulatory institutions is lower than that of home country regulatory institutions, acquirers are more likely to create value by acquiring targets in these countries as regulatory distance increases. Yet, this effect does not decrease after a certain point as hypothesized. So, hypothesis 6b did not receive support. Similarly, the interaction term between regulatory distance squared and regulatory distance asymmetry is statistically significant in model 18 with Tobin's Q_2 as the dependent variable (.602, $p < .10$). As shown in Figure 10, when the level of host country regulatory institutions is lower than that of home country regulatory institutions, there is an inverted U-shaped relationship between regulatory distance and Tobin's Q_2 . This supports Hypothesis 6b. So, model 17 with $CAR_{-19,0,+1}$ as the dependent variable did not support hypothesis 6b. Model 18 with Tobin's Q_2 as the dependent variable supports Hypothesis 6b.

TABLE 29
Hypothesis 6b Asymmetric Regulatory Distance Curvilinear Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Regulatory distance} + \gamma_{03} \text{ Regulatory distance asymmetry} + \gamma_{04} \text{ Regulatory distance squared} + \gamma_{05} \text{ Regulatory distance* Regulatory distance asymmetry} + \gamma_{06} \text{ Regulatory distance squared* Regulatory distance asymmetry} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Regulatory distance} + \gamma_{03} \text{ Regulatory distance asymmetry} + \gamma_{04} \text{ Regulatory distance squared} + \gamma_{05} \text{ Regulatory distance*Regulatory distance asymmetry} + \gamma_{06} \text{ Regulatory distance squared*Regulatory distance asymmetry} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j 's cross-border M&A value creation

TABLE 30
Hausman Endogeneity Test: Hypothesis 6b Asymmetric Regulatory Distance
Curvilinear Effect Model

	Model 17	Model 18
	CAR _{-19,0,+1}	Tobin's Q ₂
Chi-square	30.82***	33.5***
df	10	10

*** $p < 0.001$

TABLE 31
Hypothesis 6b Asymmetric Regulatory Distance Curvilinear Effect Model

	Model 17 ^b CAR _{-19,0,+1}	Model 18 ^b Tobin's Q ₂
M&A Host experiences	-0.069 (0.063)	-0.000 (0.004)
Method of payment	0.100 (0.316)	-0.025 (0.024)
Relatedness	0.068 (0.103)	0.039 *** (0.007)
Acquirer slack	0.030 (0.871)	-0.094 (0.066)
ROA	5.775 * (2.426)	2.039 *** (0.185)
Cultural distance		
Regulatory distance	1.538 † (0.859)	-0.131 * (0.065)
Regulatory distance asymmetry	-0.649 (0.838)	0.038 (0.064)
Regulatory distance squared	0.062 (0.417)	0.040 (0.031)
Regulatory distance*	2.471 (2.426)	-0.107 (0.185)
Regulatory distance asymmetry	-11.743 **	0.602† (0.326)
Regulatory distance squared*		
Regulatory distance asymmetry	(4.278)	
Constant	-1.963 ***	1.534 *** (0.043)
sigma_u	1.970	0.261
sigma_e	10.418	0.796
rho	0.034	0.097
LR Chi square		
F	2.46**	20.68***

^aN=79, n=77.7, N*n=6141

^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Note: F test is for fixed effect model, and LR Chi square is for random effect model.

FIGURE 9
Moderation Effects of Regulatory Distance Asymmetry on the Curvilinear Relationship between Regulatory Distance and $CAR_{-19,0,+1}$

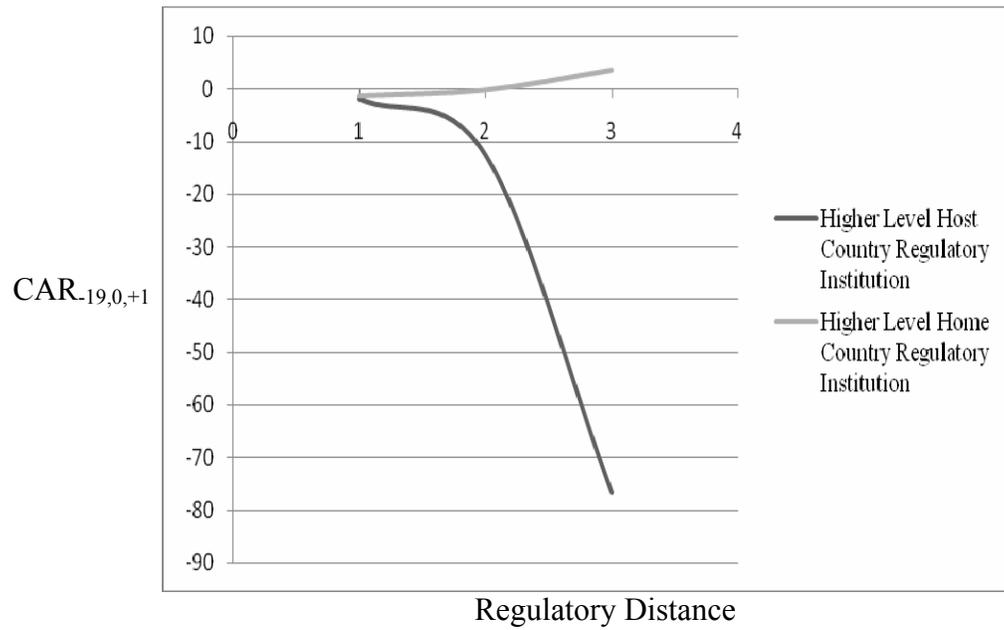
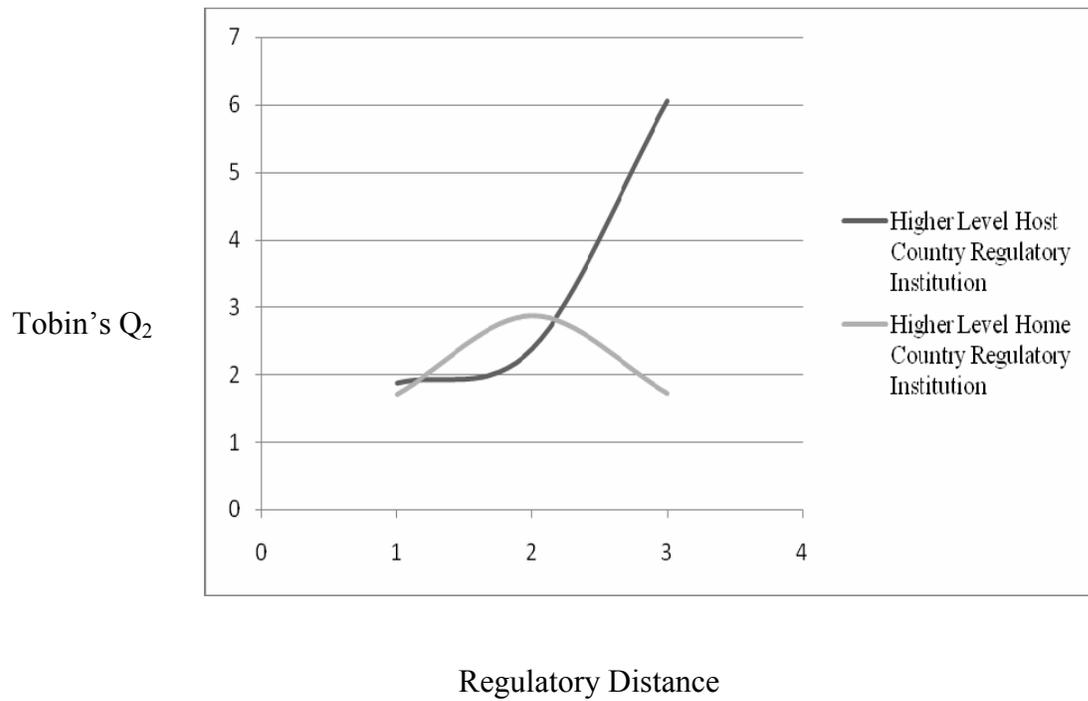


FIGURE 10
Moderation Effects of Regulatory Distance Asymmetry on the Curvilinear Relationship between Regulatory Distance and Tobin's Q_2



Hypothesis 7

Hypothesis 7 predicted that as the level of host country economic institutions is lower than that of home country economic institutions, economic distance is positively related to cross-border M&A value creation (hypothesis 7a); and as the level of host country economic institutions is higher than that of home country economic institutions, economic distance is negatively related to cross-border M&A value creation (hypothesis 7b). To test hypothesis 7, I added economic distance between the home and the host country, the dummy variable indicating whether the level of host country economic institutions is higher than that of home country economic institutions, and the interaction term between economic distance and economic distance asymmetry into the level-2 HLM analytical model as shown in Table 32. As discussed in control variables section, I fixed the coefficient of each level-1 firm variable (β_{1j} , β_{2j} , β_{3j} , β_{4j} , β_{5j}). This HLM analytical model was analyzed twice, once for each dependent variable ($CAR_{-19,0,+1}$, and Tobin's Q_2). As stated earlier, I did a Hausman endogeneity test of the analytical model before proceeding the hypothesis testing. As shown in Table 33, the Hausman statistic is statistically insignificant when dependent variables are $CAR_{-19,0,+1}$ ($\chi^2=12.96$, n.s.), and Tobin's Q_2 ($\chi^2=12.87$, n.s.). So, a random-intercept model was utilized to test hypothesis 7.

Table 34 presents the results. As shown in Model 23 with $CAR_{-19,0,+1}$ as the dependent variable, economic distance is statistically significantly and positively associated with $CAR_{-19,0,+1}$ (.420, $p < .01$), and the interaction term between economic distance and economic distance asymmetry is statistically significantly and negatively associated with $CAR_{-19,0,+1}$ (-.460, $p < .05$).

As shown in Figure 11, when the level of host country economic institutions is lower than that of home country economic institutions, there is a positive relationship between economic distance and $CAR_{-19,0,+1}$. This supports hypothesis 7a. Further, the positive relationship between economic distance and $CAR_{-19,0,+1}$ is stronger when the level of host country economic institutions is higher than that of home country economic institutions. This is opposite to hypothesis 7b. Further, while economic distance is statistically significantly and positively associated with Tobin's Q_2 (.039, $p < .05$), the interaction term between economic distance and economic distance asymmetry has no statistically significant association with Tobin's Q_2 .

In total, hypothesis 7a receives support when the dependent variable is $CAR_{-19,0,+1}$. The opposite relationship between economic distance and $CAR_{-19,0,+1}$ was found when the level of host country economic institutions is higher than that of home country economic institutions. So, hypothesis 7b did not receive the support when the dependent variable is $CAR_{-19,0,+1}$. I discuss these in discuss section.

TABLE 32
Asymmetric Economic Distance Effect Model

Level 1

$$Y_{ij} = \beta_{0j} + \beta_{1j} \text{ Host country M\&A experience} + \beta_{2j} \text{ Method of payment} + \beta_{3j} \text{ Relatedness between the acquirer and the target} + \beta_{4j} \text{ Acquirer slack} + \beta_{5j} \text{ Acquirer ROA} + e_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Economic distance} + \gamma_{03} \text{ Economic distance asymmetry} + \gamma_{04} \text{ Economic distance* Economic distance asymmetry} + U_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

Combined

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{ Host country M\&A experience} + \gamma_{20} \text{ Method of payment} + \gamma_{30} \text{ Relatedness between the acquirer and the target} + \gamma_{40} \text{ Acquirer slack} + \gamma_{50} \text{ Acquirer ROA} + \gamma_{01} \text{ Cultural distance} + \gamma_{02} \text{ Economic distance} + \gamma_{03} \text{ Economic distance asymmetry} + \gamma_{04} \text{ Economic distance* Economic distance asymmetry} + e_{ij} + U_{0j}$$

Note: Y_{ij} : acquirer j's cross-border M&A value creation

TABLE 33
Hausman Endogeneity Test: Hypothesis 7
Asymmetric Economic Distance Effect

	Model 23 CAR _{-19,0,+1}	Model 24 Tobin's Q ₂
Chi-square	12.96	12.87
df	8	8

TABLE 34
Hypothesis 7 Asymmetric Economic Distance Model

	Model	
	23 CAR _{19,0,+1}	Model 24 Tobin's Q ₂
M&A Host experiences	-0.081 (0.060)	-0.001 (0.004)
Method of payment	0.143 (0.298)	-0.022 (0.023)
Relatedness	0.030 (0.101)	0.038 *** (0.007)
Acquirer slack	-0.121 (0.850)	-0.088 (0.065)
ROA	6.574 ** (2.369)	2.178 *** (0.183)
Cultural distance	0.226 (0.205)	-0.017 (0.034)
Economic distance	0.420 ** (0.150)	0.066 *** (0.014)
Economic distance asymmetry	-1.052 *** (0.285)	0.107 * (0.045)
Economic distance*	-0.460 * (0.197)	0.011 (0.018)
Economic distance asymmetry	-1.654 ** (0.639)	1.305 *** (0.083)
sigma_u	0.000	0.161***
sigma_e	10.412	0.793
rho	0.000	0.039
LR Chi square	33.32***	278.52***
F		

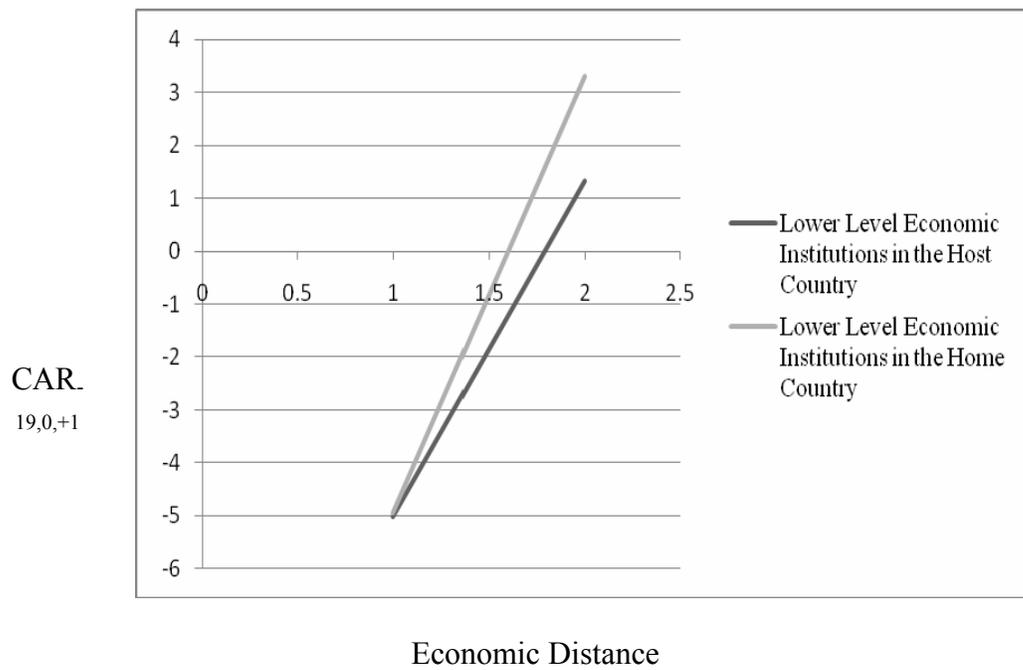
^aN=79, n=77.7, N*n=6141

^bfixed effect

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

Note: F test is for fixed effect model, and LR Chi square is for random effect model.

FIGURE 11
Moderation Effects of Economic Distance Asymmetry on the Relationship
between Economic Distance and $CAR_{19,0,+1}$



Summary of Results

Overall, the results support most of the hypotheses. The combination of these results demonstrates that host country institutions have significant effects on acquirers' cross-border M&A value creation. Further, the combination of these results clearly showed that the effects of institutional distance on cross-border M&A value creation are not symmetric. The effects of regulatory and economic distance on cross-border M&A value creation are conditional on the direction of regulatory and economic distance respectively. Table 35 provides the summary of the results.

The first four hypotheses addressed the effects of host country institutions on cross-border M&A value creation. These hypotheses answered the first research question: how do host country institutions affect cross-border M&A value creation?

First, results show that acquirers are able to create value by acquiring targets in host countries with lower level regulatory institutions (less advanced regulatory institutions) in the short term ($CAR_{-19,0,+1}$) and in the long term (Tobin's Q_2) (Supporting hypothesis 1). This is opposite to hypothesis 1. I discussed it in discussion section.

Second, results show that acquirers are more likely to create value by acquiring targets in host countries with middle level economic institutions (less investment constrained). This is consistent with hypothesis 2. Further, results suggest that acquirers are less likely to create value by acquiring targets in host countries with high level economic institutions. This is opposite to hypothesis 2. So, hypothesis 2 is partially supported. I discussed it in discussion section.

Third, results demonstrate that acquirers are able to create value by acquiring targets in host countries with high level and quality physical infrastructures in the short term ($CAR_{-19,0,+1}$), and in the long term (Tobin's Q_2) (Supporting hypothesis 3).

Fourth, results showed that host country political institutions moderate the relationship between host country regulatory institutions and cross-border M&A value creation in the short term ($CAR_{-19,0,+1}$) and in the long term (Tobin's Q_2). Meanwhile, results suggest that there is a positive relationship between host country regulatory institutions and $CAR_{-19,0,+1}$. Further, this positive relationship is weakened in host countries with high level political institutions. These findings are contrary to hypothesis 4.

Moreover, results suggest that there is a negative relationship between host country regulatory institutions and Tobin's Q_2 . Results also suggest that this negative effect is strengthened in host countries with high level political institutions. This supports hypothesis 4.

The last three hypotheses addressed how institutional distance affects cross-border M&A value creation. Particularly, I argued that the effects of distance (i.e., regulatory institutional distance, and economic institutional distance) on cross-border M&A value creation are conditional on the direction of the institutional distance. So, how does institutional distance, and how do regulatory and economic distance affect cross-border M&A value creation asymmetrically? Results suggest that acquirers are less likely to create value in similar institutional environments. Acquirers are more likely to create value when institutional distance between home country and host country increases.

Further, acquirers are less likely to create value by acquiring targets in too distant institutional environments. Institutional distance has an inverted U-shaped relationship with $CAR_{-19,0,+1}$ and Tobin's Q_2 (Supporting hypothesis 5).

Second, results suggest that the effects of regulatory distance on cross-border M&A value creation are conditional on the direction of regulatory distance. When the level of host country regulatory institutions are higher than that of home country regulatory institutions, there is a negative relationship between regulatory distance and $CAR_{-19,0,+1}$ (Supporting hypothesis 6a). When the level of host country regulatory institutions are lower than that of home country regulatory institutions, there is an inverted U-shaped relationship between regulatory distance and Tobin's Q_2 (Supporting hypothesis 6a).

Third, results demonstrate that the effects of economic distance on cross-border M&A value creation are conditional on the direction of economic distance. When the level of economic institutions in the host country is lower than that of home country economic institutions, there is a positive relationship between economic distance and $CAR_{-19,0,+1}$ (Supporting hypothesis 7a). When the level of economic institutions in the host country is higher than that of home country economic institutions, the positive relationship between economic distance and $CAR_{-19,0,+1}$ is strengthened. Yet, this is opposite to hypothesis 7b. Further, results show the positive relationship between economic distance and Tobin's Q_2 . Yet, results did not suggest that economic distance asymmetry moderates the relationship between economic distance and Tobin's Q_2 . While this supports hypothesis 7a, this does not support hypothesis 7b and the asymmetric economic distance effect logic of hypothesis 7. I discussed it in the discussion section.

TABLE 35
Summary of Results

Hypotheses	CAR _{-19,0,+1}	Tobin's Q ₂
1 There is a positive relationship between the level of host country regulatory institutions and cross-border M&A value creation.	Opposite found	Opposite found
2 There is a U-shaped relationship between the level of host country economic institutions and cross-border M&A value creation.	Partial support	Partial support
3 There is a positive relationship between the level of host country physical infrastructure institution and cross-border M&A value creation.	Support	Support
4 Host country political institutions positively moderates the positive relationship between the level of host country regulatory institutions and cross-border M&A value creation.	No support	Support
5 Institutional distance has an inverted-U shaped relation with cross-border M&A value creation.	Support	Support
6a When the level of host country regulatory institution is higher than that of home country, regulatory distance is negatively related to cross-border M&A value creation.	Support	No Support
6b When the level of the host country regulatory institution is less than that of home country, regulatory distance has an inverted U-shaped relation with cross-border M&A value creation.	No Support	Support
7a When the level of host country economic institution is lower than that of home country, economic distance is positively related to cross-border M&A value creation;	Support	Support

TABLE 35 Continued

Hypotheses	CAR _{-19,0,+1}	Tobin's Q ₂
7b when the level of host country economic institution is higher than that of home country, economic distance is negatively related to cross-border M&A value creation. that of home country, economic distance is positively related to cross-border M&A value creation.	No Support	No Support

CHAPTER VI

DISCUSSION AND CONCLUSIONS

This chapter discusses the results presented in the previous chapter. First, I provide a brief overview of the study; Second, I discuss this study's theoretical contribution including the discussion of the results of this study; Third, I discuss this study's managerial implications and public policy implications; Fourth, I present directions for future research, and offer conclusions.

Overview

Cross-border M&As represent an increasingly popular strategy for firms to enter and compete in the global market (Hitt, et al., 2006a; Shimizu, et al., 2004). The value of cross-border M&A transactions reached a record of \$3.79 trillion in 2006 (Thomason Financial, 2007). However, we have little understanding of whether and how acquirers create value from cross-border M&As (King, et al., 2004). M&A theorists suggested that synergy between the acquirer and the target leads to value creation (Hitt, Harrison & Ireland, 2001a). M&A theorists further suggested that acquirers need to identify the right target because synergy is more likely to be achieved between the acquirer and the right target (e.g., Harrison, Hitt, Hoskisson, & Ireland, 1991). A significant amount of research identifies the right target and on factors that facilitate or impede synergy realization between the acquirer and the target including resource complementarities between the acquirer and the target, and overpayment of acquirers, etc (e.g., Cording, Christmann, & King, 2008; Halebian, & Finkelstein, 1999; Hitt, et al., 2001a; Hitt, et al., 2001b; Laamanen, 2007).

M&A research has neglected the effects of external environments. The effects of external environments are particularly salient in cross-border M&A value creation. Institutional theorists have advocated that country institutions provide both incentives and constraints defining possible and productive business opportunity sets within the country (North, 1990). These business opportunities determine the kinds of firms that develop by shaping the supply of inputs (e.g., skills, capital) collectively available to firms (North, 1990). For example, bio-tech, IT and pharmaceutical firms in the United States are competitively advantaged in the global market. This is partly because the higher economic institutions in the United States supply rich financial resources for firms and allow firms to invest in these industries requiring continuous and intensive capital investment in R&D and innovation (Redding, 2005).

Country institutions affect the existence of the type of target firm that acquirers desire. Moreover, country institutions also significantly influence the behaviors of embedded firms (North, 1990; Hitt, et al., 2006). Firms indeed can be seen as a repository of socially embedded knowledge (Nelson & Winter, 1982). Acquirers and targets' behaviors influence post-acquisition integration between them and thereby influence synergy realization. Little attention has been paid to the effects of country institutions on cross-border M&A value creation. This work contributes to our knowledge of M&As by explicitly considering how country institutions, particularly institutions in host countries and institutional distance between home and host country affect cross-border M&A value creation.

Theoretical Contributions

Several theoretical contributions stem from the core findings and inform not only M&A literature but also institutions literature. First, this work shows the importance of a country's formal institutions including regulatory, economic, political and physical infrastructure institutions to cross-border M&A value creation. Particularly, I highlighted the importance of physical infrastructure institutions that have received limited attention in prior institutional research. For example, the low level and quality of physical infrastructure institutions in China in previous years have deterred foreign acquirers to capitalize on their core competences and to achieve economies of scale in huge Chinese markets. Yet, China's recent development of its physical infrastructure has significantly enhanced its attractiveness for foreign direct investment. Importantly, future research can examine the effects of these country institutions on other firm strategic behaviors and value creation.

Second, examining the effects of country institutions on cross-border M&A value creation provides new insights into sources of cross-border M&A value creation, and thereby provides contributions to the M&A literature. Results revealed two overarching findings: First, host country institutions, including regulatory, economic, physical infrastructure and political institutions, significantly affect cross-border M&A value creation; Second, institutional distance between home and host country affects cross-border M&A value creation. In particular, results demonstrated that the effects of institutional distance (i.e., regulatory and economic institutional distance) are not symmetric. The relationship between regulatory distance and cross-border M&A value

creation is contingent upon whether the level of host country regulatory institutions is higher than that of home country regulatory institutions. Similarly, the relationship between economic distance on cross-border M&A value creation is contingent upon whether the level of host country economic institutions is higher than that of home country economic institutions. I discussed the findings in detail below.

Institutions in the Host Country

Regulatory Institutions in the Host Country

Findings indicate that acquirers create value by acquiring targets in host countries with a lower level of regulatory institutions (restrictive regulatory institutions) rather than a higher level of regulatory institutions as expected. As discussed earlier, countries with lower level regulatory institutions tend to restrict foreign entry (Hitt et al., 2008). A plausible reason for this outcome is that the competition tends to be less fierce in host countries with lower level regulatory institutions. Foreign acquirers are likely more able to exploit opportunities and create value in these markets because of the lower level of competition with which they have to deal. Higher level regulatory institutions in host countries provide strong property rights protection, and thus facilitate knowledge transfer between the acquirer and the target (Hitt et al., 2008).

However, post-acquisition integration (e.g., knowledge transfer) generally takes a longer time. Cross-border M&A value creation is measured as acquirers' Tobin's Q at two years after acquisition in this work. It is likely that cross-border M&A value creation derived from higher level regulatory institutions may require more time and thus will not be reflected in this measure (i.e., more than two years after acquisition). Perhaps, a

longer term measure of performance may be necessary in these cases. This outcome suggests future research opportunities to examine the dynamic relationship between host country regulatory institutions and cross-border M&A value creation.

Economic Institutions in the Host Country

Findings suggest that acquirers are less likely to create value by acquiring targets in countries with low and high levels of economic institutions (not expected), and more likely to create value by acquiring targets in countries with a medium level of economic institutions (as expected). Firms in these countries are more able to invest significantly in technology sectors. Importantly, technology sectors possess huge growth opportunities and thus provide significant opportunities for value creation partly because of the increasingly dynamic global markets (Ehrmann & Fratzscher, 2004). So, value creation is more likely by acquiring targets in these economic institutional environments.

Yet, unexpectedly, acquirers are less likely to create value by acquiring targets in countries with high level economic institutions (i.e., no investment constraints). One plausible reason is that a large number of foreign acquirers are attracted to potential valuable targets in these countries (McNamara, Haleblan, & Dykes, 2008). This may result in greater competition among foreign suitors and bid up target prices. This also stimulates competition in the local market as the number of firms operating in the local market increases. Under this circumstance, benefits of acquiring targets in these countries quickly erode allowing the costs of cross-border M&As to override the benefits. As foreign firms acquire targets in countries with a high level of economic institutions (i.e., no investment constraints), they are less likely to create value.

Further, I hypothesized that acquirers are more likely to create value by acquiring targets in extremely low economic institutions (extremely high investment constraints). Yet, this did not receive support from the results. The primary reason for this outcome is that the sample does not include host countries with extremely low economic institutions. So, the sample does not allow a reasonable test of the hypothesis. As shown in Table 2, the mean of host country economic institutions in this sample is 1.014, and the standard deviation is 1.437. I also checked the minimum of host country economic institutions in this sample. The minimum is -.570, around 1 standard deviation below the mean. This likely does not represent extremely low economic institutions. So, constrained by the variance of host country economic institutions in the sample, the results are not able to reveal acquirers' value creation in host countries with extremely investment low economic institutions.

Physical Infrastructure Institutions in the Host Country

The findings demonstrated that acquirers create value by acquiring targets in host countries with high level and quality physical infrastructure institutions as expected. This suggests that host country physical institutions are important formal institutions, and strongly influence acquirers' value creation. Certainly, high quality physical infrastructure can help to decrease foreign acquirers' transportation costs for production factors and products. Using high quality physical infrastructure (i.e., local established distribution networks), foreign acquirers can further capitalize on proprietary technologies in the host country and to achieve economies of scale. Foreign acquirers can also benefit from being physically proximate to local customers and thus better

understand and satisfy local customers' needs. As foreign acquirers penetrate in local markets, they are more likely to obtain additional local markets' business opportunities. It is clear that physical infrastructure institutions in the host country strongly influence foreign acquirers' value creation.

Political Institutions and Regulatory Institutions in the Host Country

This study offers greater theoretical precision for understanding the effects of host country regulatory institutions on cross-border M&A value creation. While acquirers are likely to create value by acquiring targets in host countries with higher level regulatory institutions (i.e., advanced regulatory institutions), it is necessary to simultaneously examine political institutions in these countries. Institutional researchers have recognized that higher level regulatory institutions require enforcement mechanisms supported by monitoring and sanctioning power (i.e., political institutions) (Henisz, 2000a; Hitt, et al., 2008; Scott, 1995; North, 1990). Prior research showed that credible political institutions guarantee that regulatory institutions are effectively implemented and will not change unexpectedly (Henisz, 2000a; Hitt, et al., 2008).

Thus, foreign acquirers are able to exploit rich business opportunities in host countries with a higher level of regulatory institutions. Foreign acquirers need not worry that regulatory institutions are not effectively enforced, and/or change unexpectedly, and thereby business opportunities provided by these high levels of regulatory institutions are not exploitable and/or disappear swiftly. In contrast, when political institutions in host countries are not able to credibly implement their regulatory institutions, acquirers are likely to encounter expropriation by host country governments, unexpected

regulatory policy changes, etc. In these cases, acquirers are less likely to create value even in host countries with higher level regulatory institutions.

As shown in Figure 6 and 7, the findings suggest that host country political institutions moderate the relationship between host country regulatory institutions and cross-border M&A value creation. As shown in Figure 6, results show that a high level of political institutions (democratic political institutions) in host countries enhance acquirers' value creation in countries with high level regulatory institutions; and low level political institutions in host countries decrease acquirers' value creation in countries with a low level of regulatory institutions in the short term ($CAR_{-19,0,+1}$).

This finding suggests that high level political institutions encourage knowledge transfer and knowledge creation, expanding acquirers' knowledge stock and value-creating opportunities that are provided by a high level of regulatory institutions in the host country. Thus, value creation is expected in these situations (North, 2005). However, low level political institutions discourage knowledge transfer and knowledge creation, decreasing acquirers' limited value-creating opportunities in host countries with low level regulatory institutions. Thus, value creation is a much lower probability (Mohmood & Rufin, 2005).

As expected, the finding suggests that high level political institutions (i.e., credible political institutions) in host countries enhance acquirers' value creation in these countries when combined with a high level of regulatory institutions especially in the long term (i.e., two years after cross-border M&A announcements). In addition, as can be seen in Figure 11, when the level of host country regulatory institutions are the

same as that of the acquirer's home country regulatory institutions (e.g., providing the same amount of business opportunities, property rights protection), acquirers are less able to realize value creation in countries with lower level political institutions (authoritarian political institutions) than in higher level political institutions. This supports that the notion that regulatory institutions need to be supported by political institutions (Hitt, et al., 2008; Scott, 2001). Thus, high level political institutions guarantee that acquirers realize their value creation in host countries providing value-creating opportunities (regulatory institutions). To my knowledge, this is the first study that examines how the monitoring, enforcement, and sanctioning power in a country affect the functions of regulatory institutions, and thus influences its embedded firms' strategic behavior and value creation. The findings provide strong evidence to suggest that it is critical to examine a country's political institutions when investigating the effects of a country's regulatory institutions.

As shown in Figures 6 and 7, findings indicate that market investors behave differently in the short term and in the long term regarding the effects of host country regulatory institutions and political institutions. The relationship between regulatory institutions and cross-border M&A value creation is negative in host countries with a high level of political institutions and also a low level of political institutions in the long term (Tobin's Q_2); and yet the relationship between regulatory institutions and cross-border M&A value creation is positive in host countries with a high level of political institutions and a low level of political institutions in the short term ($CAR_{-19,0,+1}$).

Several factors may explain market investors' different expectations in the short term and in the long term. First, market investors have limited information about cross-border M&As in the short window around the date of cross-border M&A announcements. As discussed in our examination of global event studies, market investors may rely on widely-understood heuristics that may not apply well to the focal cross-border M&A, or may react by following a popular sentiment that may not be accurate in the short term (Madhavan & Prescott, 1995; Oler, et al., 2007). For example, Oler, Harrison, and Allen (2007) found that market investors use widely-held beliefs about market power and economies of scale to positively and significantly evaluate horizontal acquisitions at the date of announcement.

After acquirers operate in host countries for two years, market investors have more information and a deeper understanding of host country institutions and their effects on acquirers' value creation. So, they are more likely to incorporate this knowledge about host country institutions and their effects on cross-border M&A value creation to react in the market in the long term. Second, due to bounded rationality, market investors may not be able to process the information about host country regulatory and political institutions and their effects on cross-border M&A announcements in the short term. Some researchers suggest that it takes a long time for market investors to digest and understand some information related to the economic ramifications of cross-border M&A announcements (Oler, et al., 2007).

Therefore, market investors react differently in the short term and in the long term partly because different information available and different knowledge stocks regarding

the effects of host country regulatory and political institutions on cross-border M&A value creation. Further, Table 1 and Table 2 demonstrates that cross-border M&A value creation in the short term and in the long term represent two distinct dimensions of acquirers' post-acquisition performance. As shown in Table 1 and Table 2, the correlation between cross-border M&A value creation in the short term ($CAR_{-19,0,+1}$) and in the long term (Tobin's Q_2) is low and statistically insignificant.

Institutional Distance

Institutional Distance

This study confirms that acquirers fail in creating value by acquiring targets in similar institutional environments. This finding resonates with agglomeration strategy research suggesting that firms need to locate away from their competitors in similar institutional environments to avoid fierce competition for similar resources and market space (Shaver & Flyer, 2000). Further, this study demonstrates that acquirers could benefit significantly from accessing new resources and new markets in distant locations. Yet, as distance increases, LOF may dominate and override the benefits of accessing new resources and new opportunities in distant markets (Eden & Miller, 2004). As a result, acquirers are likely to suffer from performance declines.

This finding supports the importance of investing in distant markets to access new resources, and exploit new opportunities yet being sensitive to the potential LOF. Firms are able to achieve competitive advantage in the dynamic global market. At the same time, acquirers should be mindful to avoid investing in too distant markets of which they have little knowledge. This is like a traveler who knows nothing about the region s/he

plans to go such as desert, rivers, mountains, animals, roads, and available transportation facilities. As a result, s/he is likely to be lost in her/his traveling.

Asymmetric Regulatory Institutional Distance

The second set of core findings provides an initial understanding of the asymmetric effects of regulatory and economic institutional distances on cross-border M&A value creation. This study demonstrates that the effects of regulatory and economic distance are asymmetric. These asymmetric effects of regulatory and economic distance are discussed below.

As shown in Figure 6 and Figure 7, foreign firms that acquire targets in host countries with higher level regulatory institutions are less able to create value in the short term when the regulatory distance is higher. As expected, market investors seem to believe that acquirers are unlikely to create value in those host countries with higher level regulatory institutions. For example, while host countries with higher level regulatory institutions provide acquirers rich business opportunities, acquirers from countries with lower level regulatory institutions may not be able to exploit these opportunities and compete with experienced local firms successfully. Further, as acquirers are not familiar with local regulatory institutions, they encounter LOF which increases their costs when operating in distant regulatory institutional environments.

Interestingly, as shown in Figure 10, findings show that when host country regulatory institutions are higher than home country ones, acquirers are more likely to create value in the long term when the regulatory distance is larger. Institutional research suggests that countries with a higher level of regulatory institutions clearly state and

entail explicit knowledge about how economic and social activities are regulated within the country and related to other countries (Scott, 1995). Yet, countries with a lower level of regulatory institutions are not able to provide comprehensive, clear and explicit regulatory institutions because these countries partly rely on implicit government control. Information and knowledge about how governments implicitly control social and economic activities is not explicitly stated, and not transparent to firms (Redding, 2005).

Regulatory institutions in host countries with a higher level of regulatory institutions are more transparent, visible and easily accessible to firms than host countries with a lower level of regulatory institutions. Acquirers can easily find the information and materials about regulatory institutions in host countries with a higher level of regulatory institutions (Gaur & Lu, 2007). Their LOF in terms of regulatory institutions decreases significantly in the long term.

Yet, while foreign acquirers are likely to learn regulatory institutions in host countries with a lower level of regulatory institutions in order to keep the transaction costs at manageable levels before cross-border M&As, available information and materials about regulatory institutions in these countries are generally far incomplete. Foreign acquirers need to incur significant costs in navigating, experiencing and learning implicit and idiosyncratic regulatory institutions in these host countries. Further, as higher level regulatory institutions clearly regulate how firms behave in transactions, transaction costs of doing businesses in countries with higher level regulatory institutions are significantly less compared to the lower level regulatory institutions in

home countries (Scott, 1995; North, 1990). Therefore, acquirers are more able to create value by operating in countries with higher level regulatory institutions in the long term.

Further, as expected, results show that the effects of regulatory distance on cross-border M&A value creation are asymmetric. That is, the effects of regulatory distance on cross-border M&A value creation when the level of host country regulatory institutions is lower than that of home country is different from those when the level of host country regulatory institutions is higher than that of home country. As seen from Figure 10, results suggest that when foreign firms acquire targets in host countries with lower level regulatory institutions, they are more likely to create value when the regulatory distance is higher, and yet are less able to do so in the long term when regulatory distance is too high. Moreover, as seen from Figure 6 and 7, results suggest that when foreign firms acquire targets in host countries with lower level regulatory institutions, they are more likely to create value in the short term when the regulatory distance is high. Yet, the finding did not show that value creation decreases when regulatory distance is very high.

As discussed earlier, market investors may have limited information about host country regulatory institutions in the short window around the date of cross-border M&A announcements; and are too cognitively constrained to process all of the information correctly in a short period of time. Thus, they are likely to apply a widely-understood heuristic, or a popular sentiment about host country regulatory institutions in evaluating the effects on cross-border M&A value creation (Oler, et al., 2007). It is likely that market investors use widely-held beliefs about potential value creation in distant host countries with lower level regulatory institutions in their short-term

evaluation of cross-border M&A announcements. Market investors tend to be sophisticated arbitragers in the stock market because they create value by taking advantages of buying and selling price differences (Hendershott & Seasholes, 2007). Therefore, they are likely to use arbitrage logic to evaluate cross-border M&A value creation in distant markets. As developed countries have been very successfully exploiting opportunities in less developed countries in the last century, market investors are likely to value acquiring targets in distant countries with lower levels of regulatory institutions than home countries. They tend to perceive that acquirers are able to gain arbitrage rents by acquiring targets in these distant markets (Ghemawat, 2003).

In sum, results demonstrate that the effects of regulatory distance on cross-border M&A value creation are asymmetric. That is, the effects are conditional on the direction of regulatory distance.

Asymmetric Economic Distance

Figure 11 shows that when the level of economic institutions in host countries is lower than that in home countries, acquirers are more likely to create value in these host countries in the short term when economic distance is higher. However, results did not suggest a negative relationship between economic distance and cross-border M&A value creation in the short term. Rather the results indicate that when the level of economic institutions in host countries are higher than that in home countries, the positive relationship between economic distance and cross-border M&A value creation in the short term is weakened. But, the general logic of the effects of economic distance on cross-border M&A value creation are asymmetric is supported by the acquirers' cross-

border M&A value creation in the short term. Thus, it is plausible that market investors value host countries with higher level economic institutions. Market investors may expect that acquirers can benefit from munificent financial resources available in these countries, and thus are able to invest in profitable yet capital intensive projects.

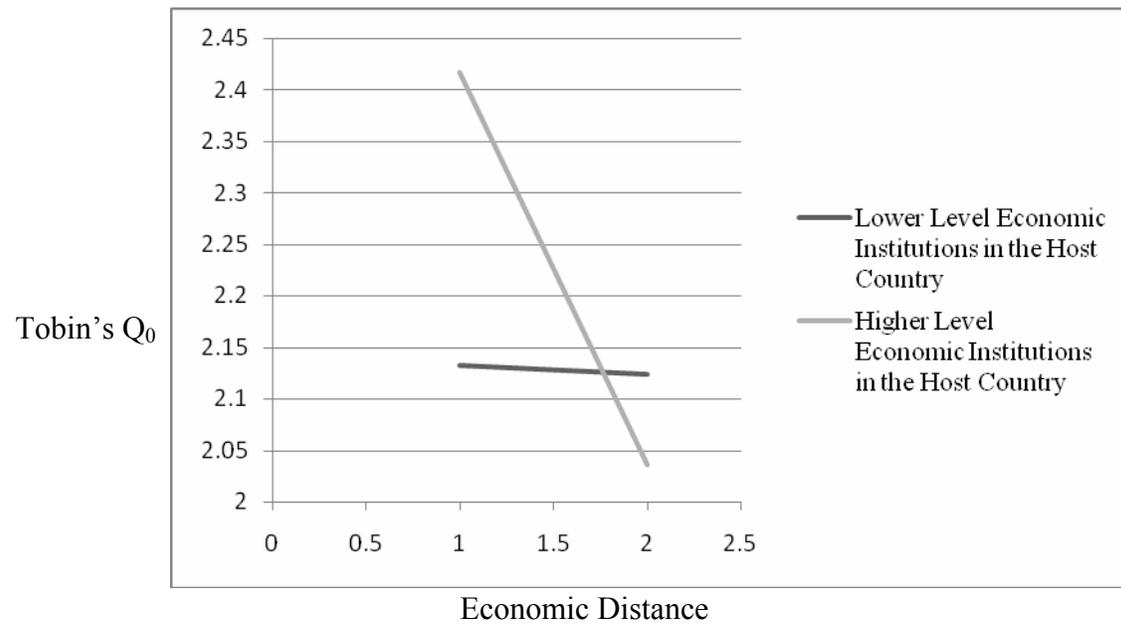
Unexpectedly, results did not show that the effects of economic distance on cross-border M&A value creation are conditional on the direction of economic distance after two years of cross-border M&A announcements. To have a better understanding whether the effects of economic distance on cross-border M&A value creation are conditional on the direction of economic distance in the long term, I examined the effects of economic distance on acquirers' Tobin's Q at the end of financial year of the focal acquirer's cross-border M&A announcement. Figure 12 graphically shows the effects of economic distance on cross-border M&A value creation are conditional on the direction of economic distance at the year end of cross-border M&A announcements (in the long term).

Interestingly, as shown in Figure 12, when the level of economic institutions is lower than that of home countries, acquirers are less likely to create value when the economic distance is higher. Further, when the level of economic institutions is higher than that of home countries, this negative relationship between economic distance and cross-border M&A value creation is strengthened. This suggests that the relationship between economic distance and cross-border M&A value creation is likely to be dynamic over time. Research has suggested that acquirers tend to encounter liability of newness and foreignness, and thus fail in value creation after they start to operate in host

countries (Eden & Miller, 2004; Lu & Beamish, 2004). Lu and Beamish (2004) showed the S curve relationship between internationalization and firm performance, clearly demonstrating that firms experience significant costs to learn new environments in their early stages of international expansion, after which they can realize positive outcomes over time. As seen from Figure 12, foreign firms experience these costs after acquiring targets in host countries with distant economic institutions. This may suggest future research opportunities.

As discussed earlier, research is needed to examine the asymmetric effects of economic institutional distance on cross-border M&A value creation in a longer term (e.g., more than two years of cross-border M&A announcements). Cross-border M&A value creation is measured as acquirers' Tobin's Q at two years after acquisition in this work. It is likely that acquirers need a longer time to overcome their liability and newness in host countries with distantly economic institutions (i.e., more than two years after acquisition). The benefits of operating in host countries with distant economic institutions are possibly able to override the costs of operating in these countries over a longer term (e.g., more than two years of cross-border M&A announcements).

FIGURE 12
Moderation Effects of Economic Distance Asymmetry on the Relationship
between Economic Distance and Tobin's Q_0



*Managerial and Public Policy Implications***Managerial Implications**

This study also offers practical implications for firms and policy implications for governments. The results inform acquirers and their decision makers about how diverse host country institutions affect cross-border M&A value creation. Thus, armed with these results, firms and their decision makers should be able to better evaluate diverse host country institutions when deciding whether or not to acquire targets in foreign countries.

Specifically, the findings suggest acquirers should acquire targets in host countries with a medium level of economic institutions (less investment constraints) to have the highest probability of creating value. Acquirers should avoid acquiring targets in host countries with low or high level economic institutions. Firms in countries with a low level of economic institutions generally represent less valuable targets because financial resources are not available for firms to invest in capital intensive technological sectors.

Yet, technology is very important for firms to compete in the increasingly dynamic global economy. Further, while many acquirers are attracted to host countries with a high level of economic institutions, they should realize that competition in these countries is fierce. So, it may be wiser for firms to acquire targets in host countries with a medium level of economic institutions. Results also suggest that foreign firms should acquire targets in host countries with high quality physical infrastructure institutions. acquirers to capitalize on their core competence and achieve economics of scale in host countries.

Moreover, this study suggests that it is important for acquirers and their decision makers to pay attention not only to host country regulatory institutions, but also to host country political institutions simultaneously. While some countries have started to provide a higher level of regulatory institutions (i.e., less restrictive regulatory institutions) to attract foreign direct investment, acquirers and decision makers need to be cautious to ensure that these countries are able to credibly commit and deliver the appropriate monitoring and enforcement. One of important functions of political institutions is to enforce and commit to regulatory institutions within the country (Hitt et al., 2008). Certainly, acquirers and their decision makers should acquire targets in host countries providing high level political institutions that credibly commit to regulatory institutions.

In addition to host country institutions, the findings suggest that acquirers and decision makers need to evaluate institutional distance between home and host countries. While acquirers may be unconsciously biased toward acquiring targets in similar institutional environments, the results suggest that acquirers should not do so if they desire to maximize value creation. Usually firms in similar institutional environments compete for similar resources and markets. Also, acquirers may not be aware of the nuances yet important differences when operating in similar institutional environments. Thus, they are less likely to create value by acquiring targets in these markets than they expect. In contrast, acquirers should acquire targets in distant markets to obtain new resources, and exploit and explore new market opportunities. Yet, institutional environments in host countries should not be too distant from those in home countries.

Liability of foreignness and newness tend to dominate when operating in a too institutionally distant market (Eden & Miller, 2004).

Importantly, the findings suggest that acquirers and decision makers should be pay careful attention to the direction of the institutional distance between the home and host countries. The results demonstrate that the effects of institutional distance on cross-border M&A value creation are contingent on the direction of the distance. If firms plan to acquire targets in host countries with a higher level of regulatory institutions than that of home countries, acquirers should select targets in countries where the level of regulatory institutions is as high as possible. Yet, if firms plan to acquire targets in host countries with a lower level of regulatory institutions than that of home countries, acquirers should select targets in countries with a lower level of regulatory institutions. At the same time, acquirers should be aware that they should not select targets in countries with a too low level of regulatory institutions.

Moreover, it might be better for acquirers to acquire targets in host countries with lower level economic institutions compared to home countries. While acquirers also tend to create value by acquiring targets in host countries with higher level economic institutions compared to home countries, acquirers can create more value by acquiring targets in host countries with lower level economic institutions than in host countries with higher level economic institutions (less investment constraints) compared to home countries.

Public Policy Implications

This work offers important public policy implications for governments. Facing the increasing integrated and competitive global economy, governments need to make choices and provide an effective institutional environment that provide greater opportunities for both domestic and foreign firms to exploit and to create value. While many governments have started to provide higher level regulatory institutions to compete with other countries for foreign direct investment including financial resources and advanced managerial knowledge, governments should ensure that these higher level regulatory institutions can be credibly sustained and supported. Only after acquirers' return on investment is ensured in host countries, are acquirers likely to invest their rich financial resources and advanced technologies, etc.

Further, governments should invest in and attempt to provide as high a level and quality of physical infrastructure within the country as possible. Higher quality physical infrastructure facilitates firms to achieve economies of scale within the country in a shorter period of time. In this dynamic competitive global economy, speed is an important competitive weapon. When firms are able to achieve higher returns on their investment in shorter periods of time, they are able to invest to provide more advanced products and services. Firms need to achieve temporary competitive advantages continuously in this dynamic global economy (Sirmon et al., 2007). So, they are able to achieve competitive advantage in the increasingly competitive global market over a longer time.

Governments should provide financial resources for local firms to invest in capital intensive technological sectors. Governments should realize that competition in the new century is based on capital intensive technologies, innovation, etc. On the one hand, local firms investing in technologies and innovation can increase their competitiveness in dynamic global markets. On the other hand, local firms investing in technologies and innovation also increase their knowledge base. So, these firms are better able to learn and absorb new technologies from their acquirers or targets, and thus continue increasing their knowledge stock and competitive capability in the dynamic global economy.

Future Research

This is the first study to systematically examine the effects of a country's formal institutions on cross-border M&A value creation. Previous studies have examined the effects of a country's formal institutions on inbound and outbound FDI and cross-border M&As (Aminian, Campart, & Pfister, 2008; Daniele & Marani, 2008; Globerman & Shapiro, 2003, 2005; Li, 2008). This work advanced our understanding of cross-border M&A value creation from an important yet neglected institutional perspective. The findings of this work provide initial insights about the effects of diverse host country institutions, and institutional distance between home and host country on cross-border M&A value creation. Meanwhile, more fruitful future research is needed.

First, this study provides a good understanding of how country institutions on cross-border M&A value creation. Yet, the mechanisms through which country institutions affect cross-border M&A value creation need to be investigated. As country institutions affect their embedded firms' behavior, home and host country institutions certainly

influence the integration between the acquirer and the target such as transferring resources from the acquirer/target to the target/acquirer, and the percentage of the target's top managers in the combined firm's top management team etc. Research on these issues could provide us a more fine-grained understanding of the effects of country institutions on cross-border M&A value creation.

Second, the sample of this work is from 1995 to 2003. During this period of time, acquirers from developed countries dominated cross-border M&A transactions. In recent years the percentage of acquirers from less developed countries has increased in cross-border M&A transactions. This work demonstrates that the effects of institutional distance (i.e., regulatory and economic distance) on cross-border M&A value creation are conditional on the direction of institutional distance. Future research should examine recent cross-border M&As with acquirers from less developed countries. Using this sample, researchers would likely provide insights regarding the asymmetric effects of institutional distance on cross-border M&A value creation.

Third, as discussed earlier, the effects of country institutions on cross-border M&A value creation are dynamic over time. Acquirers tend to encounter liability of newness and foreignness in their early stages of operating in host countries, and could achieve their value creation over time. Future research could utilize HLM growth modeling to investigate the dynamic relationship between country institutions and cross-border M&A value creation.

Fourth, constrained by the sample, this work is not able to test the effects of extremely low level economic institutions in host countries on cross-border M&A value

creation. It would be interesting for future research to investigate the S shape relationship between the level of economic institutions in the host country and cross-border M&A value creation.

Finally, in this work I did not use accounting-based measures such as return on assets (ROA), return on equity (ROE), and return on sales (ROS) because there are differences due to lack of standardization in international accounting conventions, and differences in methods of consolidating accounts after acquisition and across years, etc (Chakravarthy, 1986; Hitt, Ireland, & Harrison, 2001b). For example, the rule of pooling of interests (the assets of the two firms are combined at book value) was terminated in 2000 in the United States (Hitt, et al., 2001b). As stock markets in emerging economies and developing countries are relatively new and under-regulated, market investors in these markets may react to cross-border M&A announcements differently from those in developed market countries (Miller, et al., 2008). As seen from this work, CARs with a short-term event window is a distinct dimension of post-acquisition performance. Using a long-term event study is able to reconcile market investors' different reactions to cross-border M&A announcements. Long-term event study takes into account of market investors' reaction before announcement because of information leakage, and market investors' reaction after they obtain and digest rich information following cross-border M&As announcements. Future research perhaps should utilize long-term event study techniques to examine acquirers' cross-border M&A value creation. So, using a short-term event study, long term event study, and Tobin's Q could provide us a rich understanding of acquirers' cross-border M&A value creation.

In conclusion, this work adds to a growing body of research on cross-border M&As. Based on prior research, this work shows that it is important to examine the effects of firm level factors on cross-border M&A value creation. More important, the findings of this work provide initial and strong evidence suggesting that country institutions influence firms' behavior and thereby affect cross-border M&A value creation. Such research is of paramount importance if we want to advance our understanding, and improve the effectiveness of cross-border M&A value creation.

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APPENDIX A
Sampled Countries

Argentina	Spain
Australia	Sweden
Austria	Switzerland
Brazil	Taiwan
Bulgaria	Thailand
Canada	Turkey
Chile	United Kingdom
China	United States
Colombia	Venezuela
Czech Republic	Vietnam
Denmark	
Egypt	
Finland	
France	
Germany	
Greece	
Hong Kong	
Hungary	
India	
Indonesia	
Ireland	
Israel	
Italy	
Japan	
Malaysia	
Mexico	
Netherlands	
New Zealand	
Nigeria	
Pakistan	
Peru	
Philippines	
Poland	
Portugal	
Romania	
Russia	
South Africa	
South Korea	
Singapore	
Slovenia	

APPENDIX B

List of 45 SIC Codes

AeA uses 45 SIC codes that fall into three general groupings -- high-tech manufacturing, communications services, and software and computer-related services -- to define the U.S. high-technology industry.

AeA website is http://www.aeanet.org/Publications/IDMK_definition.asp.

HIGH-TECH MANUFACTURING

Computers and Office Equipment

- 3571 Electronic Computers
- 3572 Computer Storage Devices
- 3575 Computer Terminals
- 3577 Computer Peripherals
- 3578 Calculating and Accounting Machines
- 3579 Office Machines

Consumer Electronics

- 3651 Household Audio and Video Equipment
- 3652 Phonographic Records and Prerecorded Tapes and Disks

Communications Equipment

- 3661 Telephone and Telegraph Apparatus
- 3663 Radio and TV Broadcast and Communications Equipment
- 3669 Other Communications Equipment

Electronic Components and Accessories

- 3671 Electron Tubes
- 3672 Printed Circuit Boards
- 3675 Electronic Capacitors
- 3676 Electronic Resistors
- 3677 Electronic Coils, Transformers, and Inductors
- 3678 Electronic Connectors
- 3679 Other Electronic Components

Semiconductors

- 3674 Semiconductors and Related Devices

Industrial Electronics

- 3821 Laboratory Apparatus
- 3822 Environmental Controls
- 3823 Process Control Instruments

3824 Fluid Meters and Counting Devices
3825 Instruments to Measure Electricity
3826 Laboratory Analytical Instruments
3829 Other Measuring and Controlling Devices

Photonics

3827 Optical Instruments and Lenses
3861 Photographic Equipment and Lenses

Defense Electronics

3812 Search and Navigation Systems, Instruments, and Equipment

Electromedical Equipment

3844 X-Ray Apparatus and Tubes and Related Irradiation Apparatus
3845 Electromedical and Electrotherapeutic Apparatus

COMMUNICATIONS SERVICES

4812 Radiotelephone Communications
4813 Telephone Communications
4822 Telegraph and Other Message Communications
4841 Cable and Other Pay Television Services
4899 Other Communications Services

SOFTWARE AND COMPUTER-RELATED SERVICES

Software Services

7371 Computer Programming Services
7372 Prepackaged Software
7373 Computer Integrated Systems Design

Data Processing and Information Services

7374 Computer Processing and Data Preparation
7375 Information Retrieval Services
7376 Computer Facilities Management Services

Rental, Maintenance, and Other Computer-Related Services

7377 Computer Rental and Leasing
7378 Computer Maintenance and Repair
7379 Other Computer-Related Services

APPENDIX C

Technology Industry Classification

First, I identified all targets in the cross-border M&A database with high-technology codes. Accordingly, I classified cross-border M&As with these targets as high-technology cross-border M&As. As high-technology codes are not assigned to all targets in the cross-border M&A database, these high-technology codes are the partial solution to identify high-technology targets and cross-border M&As.

Second, I relied on Zahra, Ireland, & Hitt (2000) and American Electronic Association (AeA) high-technology industry classification to recognize additional high-technology targets. As such, cross-border M&As with these targets were added.

Zahra, et al. (2000) included the following 12 high-technology industries: biotechnology, computer software, factory automation, telecommunication, environmental technologies, medical and surgical equipment, pharmaceuticals, specialty chemicals, aerospace, test measurements, advanced materials, and semiconductors. AeA's definition of high-technology industries consist of SIC codes that fall into two broad categories—high-tech manufacturing (SIC codes: 357, 365, 366, 367, 381,382, 384 and 386) and high-tech services which include communication services (SIC codes: 481, 482, 484 and 489), and software and computer-related services (SIC code: 737). SIC codes and industry names of AeA high-technology industries in this work can be found in Appendix B.

Third, I identified targets that were not classified as high-technology ones but have technology components. These industries include all non-high technology industries

except agriculture (SIC codes: 0100, 0200, 0700, 0800, 0900), Food (SIC codes: 2000, 2100), Services (SIC codes: 4300, 5500, 5600, 5700, 6000, 6100, 6200, 6300, 6400, 6500, 6700, 7000, 7200, 8300, 8400, 8600, 8800, 8900, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9900), Wholesale (SIC codes: 5000, 5100), and Retail (SIC codes: 5200, 5300, 5400).

APPENDIX D
Global Event Study^a-- Cumulative Average Abnormal Return (CAAR) in
Multi-countries Settings

The normal return is defined as that expected if the event did not take place. An abnormal return is calculated as the difference between the observed return for a publicly traded firm and the normal return for the same firm. As the observed return for a publicly trade firm operating in both domestic and foreign markets is significantly affected by (1) local market return index; (2) global market return index; and (3) foreign currency exchange rates, the global market model is developed as follows:

$$R_{ijt}^b = \alpha_i + \beta_i R_{mjt}^b + \gamma_i R_{wmt} + \delta_i X_{jt} + \varepsilon_{ijt} \quad (1)$$

where R_{ijt} is firm i 's stock return in the local market j on day t , R_{mjt} is the local market index return on day t , R_{wmt} is the world market index return on day t , and X_{jt} is the change in the foreign currency exchange rates in country j on day t . α_i , β_i , γ_i and δ_i are firm-specific parameters, and ε_{ijt} is a random-error term with $E[\varepsilon_{ijt}] = 0$ and $\text{Var}[\varepsilon_{ijt}] = \sigma_{ij}^2$.

After estimating Equation (1), the daily excess return of firm i in country j at day t is thus estimated by:

$$AR_{ijt} = R_{ijt} - (a_i + b_i R_{mjt} + g_i R_{wmt} + d_i X_{jt}) \quad (2)$$

where AR_{ijt} are the daily abnormal returns for firm i in country j on day t , and a_i , b_i , g_i and d_i are the firm-specific OLS parameter estimates from Equation 1. It is assumed that α , β , γ and δ are stable and are calculated during an arbitrary estimation period. As such, abnormal returns derived from the world market model are adjusted for domestic market movements, global market movements, and changes in foreign currency exchange rates.

The cumulative abnormal return (CAR) for each firm i in country j , CAR_{ij} is formed by summing individual excess returns over time as follows:

$$CAR_{i,j,k,l} = \sum_{t=k}^l AR_{ijt} \quad (3)$$

where $CAR_{i,j,k,l}$ is for the period from $t = k$ days until $t = l$ days.

The cumulative average abnormal return (CAAR) over the event time from k days until l days is calculated by:

$$CAAR_{k,l} = (1/N) \sum_{i=1} CAR_{i,j,k,l} \quad (4)$$

^a I followed Park (2004)'s global event study guidance.

^b Due to lack of synchronism in stock market trading hours, I lagged firm stock and local market return by 1 day for acquirers from Australia, Japan, Korea, Malaysia, New Zealand, Singapore, and Thailand, etc. For missing data due to country specific events such as national holidays, I used only the available data, removing the missing period and the succeeding day from the analysis.

APPENDIX E
Countries in the Final Sample

Argentina
Australia
Brazil
Canada
China
Denmark
Finland
France
Germany
Hong Kong
India
Ireland-Rep
Israel
Italy
Japan
Mexico
Netherlands
New Zealand
Poland
South Africa
South Korea
Spain
Sweden
Switzerland
Taiwan
United
Kingdom
United States

APPENDIX F
Level-1 Variables in Home Countries^a

Home Country	Number of cross-border M&As	ROA	Slack	Relatedness	Acquirer's host country M&A Experience	Methods of Payment	CAR _{19,0,+1}	Tobin's Q
Australia	121	0.065	0.160	2.793	0.711	0.240	1.279	1.573
Austria	20	0.026	0.097	2.300	1.600	0.050	-0.715	1.102
Canada	467	0.060	0.219	2.959	1.672	0.291	0.425	1.613
Finland	90	0.095	0.258	2.867	2.089	0.178	0.915	1.840
France	295	0.065	0.294	2.956	1.542	0.163	-2.003	1.596
Germany	285	0.050	0.233	2.611	1.288	0.165	-1.028	1.356
Hong Kong	46	0.016	0.085	2.348	0.848	0.261	-0.241	1.467
Ireland	111	0.081	0.270	2.874	4.306	0.432	-1.070	1.414
Israel	20	0.068	0.167	3.250	0.500	0.550	1.135	1.495
Japan	113	0.045	0.249	2.265	1.929	0.115	-0.566	1.339
Netherlands	235	0.098	0.411	2.804	2.511	0.170	-0.078	1.565
New Zealand	21	0.094	0.310	3.000	0.810	0.333	-0.285	1.659
South Korea	20	0.063	0.318	3.450	0.250	0.000	-0.697	1.215
Sweden	184	0.070	0.215	2.978	1.255	0.201	0.668	1.611
switzerland	182	0.072	0.233	2.681	1.346	0.203	0.787	1.708
UK	1195	0.092	0.295	2.802	1.341	0.581	-0.337	1.743
US	2736	0.093	0.280	2.958	0.565	0.221	-0.986	1.872

^aall variables are means

APPENDIX G
Level-2 Variables in Home Countries^a

Home Country	Number of cross-border M&As	Cultural distance	Host country regulatory institution	Host country economic institution	Host country political institution	Host country physical infrastructure	Institutional distance	Economic distance	Regulatory distance
Australia	121	1.372	-1.212	1.308	0.598	0.309	2.161	1.708	0.343
Austria	20	1.269	-0.661	0.970	0.682	0.020	1.328	1.165	0.162
Canada	467	0.974	-1.043	2.807	0.644	0.543	3.067	2.643	0.339
Finland	90	1.794	-0.909	1.187	0.675	0.042	1.722	1.452	0.335
France	295	1.936	-1.030	1.399	0.467	0.181	1.647	1.082	0.811
Germany	285	1.964	-0.922	0.897	0.498	0.065	1.347	0.951	0.455
Hong Kong	46	3.626	1.550	1.548	-2.527	3.120	5.487	1.788	3.637
Ireland	111	1.785	-1.206	0.967	0.311	-0.140	1.572	1.332	0.225
Israel	20	1.257	-1.079	3.148	0.687	0.761	4.144	3.573	0.844
Japan	113	2.388	-1.107	2.721	0.579	0.061	2.780	2.516	0.953
Netherlands	235	2.174	-0.874	1.243	0.490	-0.173	2.529	1.629	0.442
New Zealand	21	2.283	-1.019	-0.192	0.881	-0.186	0.540	0.267	0.356
South Korea	20	3.144	1.808	2.425	-2.286	6.412	7.386	2.294	2.048
Sweden	184	2.383	-0.822	0.991	0.613	0.053	1.558	1.251	0.377
switzerland	182	1.858	-0.856	1.517	0.573	0.072	2.014	1.587	0.333
UK	1195	1.458	-0.884	1.423	0.578	0.026	1.812	1.410	0.398
US	2736	1.717	-0.651	0.335	0.475	-0.035	2.915	2.521	0.580

^aall variables are means

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