INSTITUTIONAL CONTINGENCIES OF FIRMS’ STRATEGIC CHOICES

DISSERTATION

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By

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ABSTRACT

Many scholars today agree that institutions matter, but how they matter, for what strategies, under what circumstances, and to what extent are not well understood in the literature. Most of the existing research has focused on the effect of national culture on firms’ strategic choices in international expansions. However, the effect of formal institutions, such as legal systems, political structures, and rules governing corporate transparency, has yet to be studied extensively. My dissertation investigates this central question: How do institutions affect firms’ strategic choices and performance? Utilizing both theoretical modeling and empirical analysis, I investigate the impact of different dimensions of institutions on three important business strategies: strategies in managing business-to-business relationships, strategies in dealing with business-to-government relationships, and strategies on foreign expansions in my three essays of the dissertation respectively. Specifically, my first essay models the cross-country heterogeneity in the orientation of choosing relational transactions versus arm’s length transactions, as well as the dynamics of governance choices during institutional transitions. My second essay empirically examines the institutional antecedents and growth consequences of bribery strategy, and finds that poor market-supporting institutions lead to more bribery and hurt the growth of small firms, although the growth of large firms remains unaffected. My third essay explores the effect of information institutions governing corporate transparency on bidders’ market performance in international acquisitions. The empirical
results show that investors will discount the value of the bidders when there is high
information asymmetry due to poor information institutions in a target country. However,
the degree of discount is also contingent on micro firm-level and transaction-level factors.
In sum, these three essays systematically explore the effect of formal institutions on a
series of critical business strategies by identifying how institutions matter, to what extent
and in what way. My whole dissertation therefore is designed to contribute to an
institution-based view of business strategies.
Dedicated to my husband, my family and to Jesus Christ
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CHAPTER 1

INTRODUCTION

How do institutions affect firms’ strategic choices and performance? Institutional factors have many dimensions (North, 2000), which are closely connected (Whitley, 1994) and may change at different speeds (Hoskisson et al, 2000). In other words, given the tremendous diversity of institutions, how do distinctive dimensions of institutions affect different types of business strategies? In the three essays of my dissertation, I pursue this question by investigating the effects of institutions on firms’ strategic choices in managing business-to-business relationships and in dealing with business-to-government relationships and on foreign expansion respectively.

Essay One (Chapter 2) tries to understand the following questions: (1) What specific factors determine the benefits and costs of a relationship-based strategy relative to those of a market-based strategy? (2) Where precisely is the critical point that shifts the dominance of one strategy over the other? (3) How to explain the cross-country variations in the optimal timing of the strategic transitions? (4) What are the industry-level and firm-level contingencies in this process?

Essay Two (Chapter 3) examines the institutional roots and firm growth consequences of bribery strategy around world. Drawing on large-sample, cross-country
data from the World Bank on 2,686 firms across 48 countries, this study directly investigates two related questions: (1) Does firms’ level of bribery vary systematically according to the quality of market-supporting institutions in different countries? (2) Does a high level of bribery help facilitate firm growth?

Essay Three (Chapter 4) explores the effect of information institutions governing corporate transparency on the information cost of making international acquisitions. Specifically, we are interested in: 1) How do the host country’s information institutions affect the home country investors’ reactions to international acquisitions? and 2) When information institutions are poor, what kind of private firm-level information mechanisms may help firms mitigate the information problem?

These three essays provide a multi-faceted investigation on the effect of institutions on strategic choices to understand how institutions matter, to what extent and in what way.
CHAPTER 2

FROM RELATIONAL EXCHANGES TO ARM’S-LENGTH TRANSACTIONS
DURING INSTITUTIONAL TRANSITIONS

2.1 Introduction

Institutional transitions are “fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players” (Peng, 2003: 275). How do firms make strategic choices in response to institutional transitions in emerging economies? A stream of research suggests that relational exchanges (personalized transactions based on informal relationships) have been a dominant strategy for firms embedded in emerging economies (Boisot & Child, 1996; Chen, 2001; Hallen & Johanson, 2004; Khanna & Palepu, 1997; Peng & Heath, 1996; Peng & Luo, 2000). However, strategic choices during institutional transitions are not likely to be static. Another stream of research argues that as market-oriented institutions develop, firms may gradually move from a relationship-based strategy based on relational exchanges to a rule-based strategy featuring arm’s-length transactions (Grief, 2002; North, 1990; World Bank, 2002). In an influential recent article, Peng (2003) argues that there are two phases (early and late) of institutional transitions, and that such strategic transitions from relational to arm’s-length transactions are especially likely to occur during a late phase of institutional transitions.
However, little is known about under what circumstances such strategic transitions are undertaken. More importantly, given the diversity of informal institutions (such as national culture) and formal institutions (such as legal frameworks) across countries, how firms, embedded in different institutional contexts, make choices differently remains to be explored. This article endeavors to start filling in this void.

The purpose of this article, therefore, is to develop a parsimonious model of the institutional contingencies governing firms’ strategic transitions from relational transactions to arm’s-length exchanges. Modeling methods enjoy the advantage of rigor and simplicity with explicit assumptions and transparent logic (Buckley & Casson, 1998). Specifically, we derive a model of strategic transitions from a fine-grained analysis encompassing informal institutions of national culture and formal institutions that encourage market competition, reduce information problems, and enhance legal effectiveness (North, 1990, 2005; Williamson, 1991, 2000; World Bank, 2002). These market-supporting institutional dimensions have seldom been examined systematically in the strategy literature. We then predict the cross-country variations in firms’ optimal timing of the strategic transitions from relational transactions to arm’s-length exchanges. Thus, we add accuracy, precision, and richness to Peng’s (2003) influential but relatively underspecified two-stage framework on the general trend of the strategic choices in response to institutional transitions.

This exploration extends the previous literature on the dynamics of strategic choices, most of which is built on stable market institutions (Child, 1972, 1997; Madhavan, Koka, & Prescott, 1998). We accomplish this by examining the choices under large-scale institutional transitions in the unique experimental settings of emerging economies (Child
This article also contributes to an institution-based view of business strategy (Meyer & Peng, 2005; Wright et al., 2005) by focusing on how cross-country variations in institutional transitions lead to the heterogeneity of firms’ strategic choices. Both the dynamic analysis and the comparative analysis of strategic choices across countries are important to understand the institutional context for business strategies (Biggart & Delbridge, 2004). Finally, by modeling the benefits and costs of exchange strategies in different institutional contexts, it also sheds light on the interaction between micro transaction governance and macro institutional structure – a weak link in the existing literature (Williamson, 2000).

We structure the article by addressing the following questions: (1) What specific factors determine the benefits and costs of a relationship-based strategy relative to those of a rule-based strategy? (2) Where precisely is the critical point that shifts the dominance of one strategy over the other? (3) How to explain the cross-country variations in the optimal timing of the strategic transitions? (4) What are the industry-level and firm-level contingencies in this process?

2.2 Literature Review

2.2.1 Relational Transactions versus Arm’s-length Transactions

Although neoclassic economics focusing on market economies assumes arm’s-length transactions based upon price mechanisms, many business transactions in developed economies are relationship-based (Barney & Hansen, 1994; Dyer & Singh,
The economic value of relational transactions over arm’s-length transactions primarily stems from (1) reducing transaction costs by constraining opportunism through informal mechanisms such as mutual trust, cooperative norms, and values as opposed to formal contracts; and (2) accessing information/resources and achieving flexible coordination through socially embedded relationships.

Studies in developed economies have found that under certain circumstances, relational exchanges may be more valuable than arm’s-length transactions. For example, industries emphasizing process innovation and facing demand uncertainty (e.g., the automobile industry) often require flexible coordination and information/resource sharing among network members, thus firms in these industries may be more likely to choose relational transactions over arm’s-length exchanges to reduce coordination costs (Aoki, 1990). In contrast, industries featuring little product innovation or stable demand (e.g., the textile industry) require much less inter-firm coordination, and the tendency for relational transactions is relatively weak. At the transaction level, transactions with a moderate level of asset specificity and future uncertainty are more likely to be made through embedded relationships than through arm’s-length relationships to reduce transaction costs (Williamson, 1991). The value of relational transactions is also higher for transactions facing measurement uncertainty – uncertainty in verifying the quality of exchange goods (Akerlof, 1970; Ouchi, 1980). For example, in the Toyota keiretsu network, when a technology becomes mature and standardized (often reducing asset specificity, measurement uncertainty, and the demand for interfirm coordination), firms start to move out of relational networks to look for the most cost/price competitive
suppliers around the world, which are often not members of the keiretsu, to reduce costs (Ahmadjian & Lincoln, 2001).

Similar research in emerging economies has found much more pervasive use of relationships in business transactions and attributed it mostly to institutional factors (Peng & Luo, 2000; Xin & Peace, 1996). The lack of formal legal and regulatory frameworks – known as “institutional voids”– has been frequently cited as the reason for the extensive use of relational transactions (Khanna & Palepu, 1997; Peng & Heath, 1996). We argue that the value of relying on personal relationships is amplified by poor development in the market-supporting institutions in emerging economies. Specifically, we identify three core pillars of market-supporting institutions: (1) institutions that encourage market competition, (2) institutions that reduce information problems, and (3) institutions that enhance legal effectiveness. Poor quality on these crucial dimensions intensifies the transaction costs for arm’s-length transactions. We argue that differences in these three formal institutions, along with informal institutions of national culture, may lead to cross-country variations in the relative dominance of relational exchanges over arm’s-length transactions.

2.2.2 Institutions and Transaction Costs

How does the institutional context change the economic value of relational transactions? Institutions, as “rules of the game,” shape the benefits and costs of different strategies (North, 1990). Scott (1995) suggests that institutions consist of three pillars – regulative, normative, and cognitive – which provide stability and meaning to social behavior. An institutional framework is made up of formal and informal institutions that
affect the net benefits of relational transactions and consequently influence firms’
incentives to adopt a relationship-based strategy (Li, 1999; Rajan & Zingales, 1998). In
this section, we review the literature in a framework of informal institutions, mainly
national culture, and formal institutions that govern market competition, legal
effectiveness, and information dissemination. These dimensions may not be exhaustive,
but are crucial to the functioning of market-oriented institutions that foster impersonal

Informal Institutions: Culture and Transaction Costs. National culture, which we
label “culture” in this article for compositional simplicity, has a fundamental impact on
the transaction costs of relational exchanges by defining cooperative norms and values
(Jones, Hesterly, & Borgatti, 1997) and the level of general trust toward strangers in a
given society (Fukuyama, 1996). Hofstede (1980) distinguishes between individualistic
and collectivistic cultures in that individualistic cultures (such as the United Kingdom
and United States) are relatively less committed to group norms or interests than
collective cultures (such as China, Japan, and Korea). In collectivist cultures, both the
normative pressure and the cognitive value to cooperate with in-group members (such as
those in the same network) are much higher than those in individualistic culture.
Similarly, Chen, Peng and Sapapito (2002) suggest that culture affects individuals’
propensity to engage in opportunism. Specifically, individualists may have a higher
propensity to engage in opportunism in in-group transactions with known players,
whereas collectivists may have a higher propensity to engage in opportunism in out-
group transactions with strangers. In other words, in collectivistic cultures, there are
higher levels of trust for in-group members (such as firms in the same relational networks)
than for out-group members. When transacting with in-group members, firms embedded in collectivistic cultures with high cooperative norms or values, due to lower levels of opportunism, may enjoy higher coordination benefits and lower enforcement costs of relational transactions than those embedded in individualistic cultures.

*Competition Institutions and Transaction Benefits.* The formal institutions (such as competition laws) governing market competition, open trade, and free entry and exit of market players increase the opportunity costs of sticking to embedded relational networks. Burt, Guilarte, Raider, and Yasuda (2002) demonstrate that firms in a highly competitive industry faces much higher pressure to lower costs and seek innovation than those in an industry with a low or moderate level of competition. In other words, if the level of competition is low and the production costs of network firms is similar to outsiders, then the focal firms are likely to lock in with network firms to reduce transaction costs. However, when a high level of competition significantly drives down the price quoted by outside suppliers or bids up the profit margin of trading with out-network buyers, the incentives to trade with outsiders or strangers via arm’s-length transactions are likely to grow. For organizations under high competitive pressures, trading with distant others possessing unique and novel information and resources may be especially crucial to facilitate the absorption, transfer, and exchange of cutting edge technologies and practices (Burt, 1992; Uzzi, 1996). The extensiveness and effectiveness of regulation in promoting fair competition varies substantially around the world. With the ongoing economic integration such as the World Trade Organization (WTO) and European Union, many countries today are experiencing institutional transitions toward more open competition both domestically and internationally. The growing competition may
gradually increase the potential payoffs for arm’s-length transactions and the opportunity costs of sticking to existing network partners (Peng, 2003; Steensma, Tihanyi, Lyles, & Dhanaraj, 2005).

**Legal Institutions and Transaction Costs.** Even though competition creates many opportunities to transact with the most competitive parties on a wide scope, legal institutions are essential for complicated and high-volume impersonal transactions. Judicial inefficiency causes high transaction costs for business litigations and deters potentially valuable impersonal exchanges (Peng & Zhou, 2005). An effective judicial system increases people’s confidence in the likelihood of exchange partners’ fulfilling legal obligations, thus enhancing the willingness to reach out to new exchange partners (Johnson, McMillan, & Woodruff, 2002). Systematic variations exist in the effectiveness of legal systems across countries. For example, in Latin America, the average duration of commercial cases is two years and complex cases often take five years. In contrast, similar cases in France, Singapore, or the United States usually take less than a year (Dakolias, 1996). These variations in legal effectiveness often result from different legal origins (Beck, Demirgüç-Kunt, & Levine, 2003; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998) and different paces of legal development (Pistor, Raiser, & Gelfer, 2000). Williamson (1991) classifies property laws and contract laws as the “shifting parameters” that drive the equilibrium governance choices in different countries.

**Institutions Reducing Information Problems and Transaction Costs.** The costs of arm’s-length transactions are also reduced by sufficient information flows that could reduce the uncertainties of product quality verification in impersonal exchanges (North, 1990). “Institutions can affect the production, collection, analysis, verification and
dissemination – or the withholding of information and knowledge” (World Bank, 2002: 8). Information asymmetry is a very common problem for business exchanges, which often leads to reliance on personal relationships to reduce the uncertainty. The low degree of information codification and information dissemination has been one of the most important drivers for a relationship-based strategy (Boisot & Child, 1999). Good information flow helps businesses identify suitable exchange partners and assess their credit-worthiness. Quality certification organizations, accounting regulation, disclosure requirement, credit registries, and the professionalism of accounting and financial firms are all important components that build up a country’s information institutions supporting arm’s-length exchanges. Poor institutional development failing to reduce the information problems often leads to the stagnation of the development of impersonal exchanges (World Bank, 1998). Compared with developed economies, emerging economies often suffer from severe information problems undermining market growth (Khanna & Palepu, 1997).

Overall, the three dimensions of market-supporting institutions governing market competition, legal effectiveness, and information dissemination complement and reinforce each other (Peng & Zhou, 2005). Without intensive product market competition, the opportunities to exchange with players outside one’s relational networks will be slim. Without good information flows, product quality as well as partner credibility outside relational networks may be too costly to verify (Akerlof, 1970). Without effective legal institutions, opportunistic threats would pose high enforcement costs and deter the viability of impersonal exchanges. Therefore, building an efficient market system requires institutional developments on these dimensions simultaneously.
Given that institutions are composed of multiple dimensions which are closely connected and mutually reinforcing (Whitley, 1994), institutional transitions may manifest diverse patterns with different dimensions changing at different speeds. How do firms make strategic choices in response to institutional transitions? Emerging economies provide a natural experimental environment to study the changing dynamics of strategic choices (Peng, 2003; Wright et al., 2005). Despite its insights, Peng’s (2003) two-stage framework, focusing on the general institutional transitions, has presented a relatively simplistic view of strategic transitions from relational to arm’s-length transactions. In other words, he has failed to capitalize on the rich dimensions of institutions and the consequent heterogeneity in institutional transitions outlined above. Building on Peng (2003), the remainder of this article builds a model to shed light on the dynamics of strategic and institutional transitions based on a finer-grained institutional analysis.

2.3 The Model

As the economy grows, the number and range of partners reachable through impersonal exchanges increase and market transactions become complicated (North, 1990; Peng, 2003; Rajan & Zingales, 1998). The expanded transactions demand the development of formal institutions that facilitate impersonal exchanges. However, the demand of formal institutions does not automatically lead to their supply. Governments and interest groups often play a significant role in designing and building institutions (Henisz & Zelner, 2005; Ring, Bigley, D'Aunno, & Khanna, 2005). Institutional transitions are largely an incremental, path-dependent process (North, 1990, 2005). This
process within each country may stall or reverse because of political, economic, or social conflicts (Rajan & Zingales, 2003). Countries vary significantly in the initial quality of legal institutions, market economy experience, and cultural values and beliefs, which affect their speed and effectiveness to build new institutions. Due to these historical differences across countries, the capability to foster competition, mitigate information asymmetries, and enforce contracts also varies significantly around the world.

For example, in a comparative study on legal effectiveness across countries, La Porta et al. (1998) find that legal origins (common law versus civil law) can significantly affect the effectiveness of rules. The economics of transition literature (Dakolias, 1996; Djankov, Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2003; Engerman, Haber, & Sokoloff, 2000; North, 2005; Pistor et al., 2000) documents that the speed to build up legal institutions will be different depending on whether the “big-bang” or gradual transition policy is adopted. The quick collapse of former central plan system in Central and Eastern Europe within 2-3 years in the early 1990s were termed as “institutional upheaval” (Newman, 2000), while China took a much more gradualist approach over the past 30 years (Child & Tse, 2001). Consequently, the progress of institutional transitions varies across countries due to the difference in the initial level and the development speed of market-supporting institutions.

Capturing these variations in institutional transitions across countries, we first model the dynamics of arm’s-length transactions in response to market-oriented institutional transitions, and then model the dynamics of relational transactions based on cost-benefit analysis. The optimal timing of the strategic transitions from relational to arm’s-length transactions will be analytically derived. The comparative statistics are analyzed next to
shed light on the cross-country differences as well as industry-level and firm-level contingencies.

2.3.1 Institutional Transitions and Arm’s-length Transactions

For simplicity, we model the process of institutional transitions toward market economies as the gradual increase in the quality of market-supporting institutions over time, increasing the net benefits of arm’s-length transactions. Given that different countries may have heterogeneous trajectories of transitions in institutions governing market competition, information dissemination, and legal effectiveness due to path dependence, we model the net benefits (that is, total benefits – total costs) of arm’s-length transactions for firms in a one country at time t contingent on the development of these three institutional dimensions. Specifically, the level of market competition at time t is modeled as the combination of the initial level of market competition \(C_0\) and the growth rate \(\beta\) of market competition over time. Similarly, the legal effectiveness at time t is modeled as the combination of the legal effectiveness at the initial stage of economic transitions \(R_0\) and the development of rules of law over time with a rate of transition \(\gamma\). Finally, the development of institutions that reduces information problems is modeled as the initial level of information dissemination \(I_0\) and the transition rate of \(\lambda\).

The transition rates of competition, information dissemination, and legal effectiveness are all assumed to be positive and less than 1 to capture the increasing efficiency over time at a decreasing rate. The transition rate here is considered as the average progress rate over time, since the institutional development may stall or reverse
in a country due to certain crisis and it has rarely been a linear progress. The multiplication form between the three institutional dimensions is adopted to capture the complementary nature between them. The transaction costs savings resulting from the development of market-supporting institutions could be viewed as the increases in the net benefits of arm’s-length transactions. Thus, the net benefits of arm’s-length transactions over time can be presented as:

*Net Benefits of Arm’s-length Transactions (NBAT)*

\[
\text{NBAT} = C_0 (1 + \beta)^t R_0 (1 + \gamma)^t I_0 (1 + \lambda)^t \quad (0 < \beta < 1, \ 0 < \gamma < 1, \ 0 < \lambda < 1)
\]

where

- \(C_0\) = the initial level of competition in an industry;
- \(\beta\) = the growth rate of competition of an industry;
- \(R_0\) = the initial level of legal effectiveness;
- \(\gamma\) = the growth rate of the legal effectiveness;
- \(I_0\) = the initial level of institutions that reduces information problems;
- \(\lambda\) = the growth rate of institutions that reduces information problems.

The three institutional dimensions are both distinctive and interrelated to each other. Competition creates the demand for the development of legal institutions and public information institutions (Pistor et al., 2000). Conversely, effective legal and information institutions facilitate wider scope competition beyond narrow, regional markets.

Moreover, effective legal enforcement deters opportunism such as fraudulent information manipulation in transactions, while credible information institutions also reduce the information costs in the case of legal litigation. Therefore, institutional developments that encourage competition, enhance legal effectiveness, and facilitate information
dissemination interact and complement each other, and reduce the need to rely on relational networks to safeguard transactions and access information. This mutually reinforcing effect of the three dimensions is treated as the multiplicative effect in the model.

2.3.2 Modeling the Benefits and Costs of Relational Transactions

Relational, network-based transactions, relative to impersonal, rule-based exchanges, have advantages in resource access, information sharing, and informal control (Gulati, 1998; Peng & Heath, 1996). “The broader an actor’s network connections, the more likely the actor will be to identify suitable potential exchange partners” (Rangan, 2000: 863). In addition to lowering search costs, embedded network relations will also reduce transaction costs by economizing on the negotiation costs and monitoring/enforcement costs for opportunism (Dyer & Nobeoka, 2000; Granovetter, 1985). Therefore, the larger a firm’s network grows, the more benefits it may enjoy – up to a certain point (Peng, 2003). When a firm’s relationship network expands, the benefits of relational network may differ for industries with different level of coordination and uncertainty (Aoki, 1990; Park & Luo, 2001) and for firms at different development stage (Hite & Hesterly, 2001; Peng, 2003). In addition, the benefits of relational network may also be affected by national culture (North, 2005). High cooperative norms and values facilitate information and knowledge sharing among exchange partners, and reduce the monitoring/enforcement costs (Hill, 1995). Therefore, when holding the size of the network constant, firms embedded in high cooperative cultures may enjoy more network benefits than those in low cooperative cultures.
However, network cultivation and maintenance are not without costs (Gargiulo & Benassi, 2000). Historical evidence shows that the expanded scope and complexity of commercial transactions gradually decrease the efficiency of informal relationship-based enforcement mechanisms, calling for a more efficient formal institutions that support impersonal exchanges (Greif, 2003; North, 1990). In other words, as network expands, the marginal costs of maintaining a larger network may increase, and after reaching a certain threshold, the marginal costs may exceed the marginal benefits (Ojasalo, 2004). Firms, constrained by the limits of the manageable size of relational networks, may suffer high opportunity costs for missing new exchange partners outside the network (Barney & Hansen, 1994; Johnson et al., 2002; Uzzi, 1996). These outside opportunities are often important sources for new information, innovation, and technology.

 Accordingly, the net benefits of relational transactions are modeled on two factors: the micro-level network benefits and costs (which may change over time) and the macro-level (country-level) cooperative norms and values (which are relatively stable and resistant to change). We assume cooperative norms \(N\) vary across countries because of cultural differences. At the micro-level, we model the changes of the network benefits as a firm’s initial network benefits \(s_1\) expanding at a rate of \(\alpha_1\) over time. \(\alpha_1\) is restricted to be positive and less than 1 to capture the decreasing returns to scale. Similarly, the changes of network costs are modeled as initial management costs of relational networks \(s_2\) increasing at an expansion rate of \(\alpha_2\) when networks grow over time. For simplicity, we assume \(s_2 < s_1\). This assumption is based on Greif (2003), Peng and Heath (1996), Peng (2003), and North (1990), who suggest that the initial network costs are less than the initial network benefits. We also assume \(\alpha_1 < \alpha_2\). This assumption that the
network costs increase at a higher speed over time than the network benefits captures Peng’s (2003) theoretical reasoning that at some point the marginal costs of cultivating social network will outweigh the marginal benefits. As a result, the net benefits of relational transactions can be presented as:

\[ \text{Net Benefits of Relational Transactions (NBRT)} \]

\[ \text{NBRT} = \frac{s_1(1 + \alpha_1)N}{s_2(1 + \alpha_2)^t} \quad (0 < \alpha_1 < \alpha_2 < 1, 0 < s_2 < s_1) \]

where \( s_1 \) = the initial network benefits for a company;

\( \alpha_1 \) = the network benefits expansion rate over time;

\( N \) = the level of cooperative culture in a country.

\( s_2 \) = the initial network costs;

\( \alpha_2 \) = the network costs expansion rate over time.

The initial network benefits for a company \((s_1)\) may differ across different firms (Hite & Hesterly, 2001; Peng, 2003), due to differences in initial stock of network resources (e.g. entrepreneurial firms vs. incumbents). And the network benefits expansion rate \((\alpha_1)\) also differ across industries with different network coordination necessity, demand uncertainty (Aoki, 1990), and measurement uncertainty (Ouchi, 1980). Both the initial network costs \((s_2)\) and the network costs expansion rate \((\alpha_2)\) may differ across firms with different relational capabilities (Dyer & Singh, 1998). National culture \((N)\) is relatively stable over time, and amplifies the benefits of relational transactions in countries with highly cooperative cultures (Hill, 1995).
Firm’s Optimal Timing of the Strategic Transitions

The net benefits of arm’s-length transactions can be viewed as the opportunity costs of trading with network partners, and vice versa. Thus, the optimal timing of the strategic transitions emerges when the net benefits of arm’s-length transactions equal those of relational transactions.

Let \( NBRT = NBAT \), we obtain

\[
C_0 (1 + \beta)^t R_0 (1 + \gamma)^t I_0 (1 + \lambda)^t = \frac{s_1 (1 + \alpha_1)^t N}{s_2 (1 + \alpha_2)^t} \quad [3]
\]

Figure 2.1 describes the net benefits curve of relational transactions and arm’s-length transactions. It shows that with the institutional transitions toward more market competition, the net benefits of relational transaction gradually decrease, and the net benefits of arm’s-length transaction increase over time. Assume \( C_0 R_0 I_0 < s_1 N / s_2 \) – that is, when \( t = 0 \), the net benefits of relational transactions outweighs that of arm’s-length transactions. This is consistent with Peng (2003), who illustrates that during the early stage of the institutional transitions, the optimal transaction strategy will be relationship-based. As time goes by, the net benefits of arm’s-length transactions gradually catches up and eventually becomes higher than that of relational transactions after passing the intersection point of the two curves. Under such cost-benefit reconfigurations, firms will gradually move toward arm’s-length transactions. The optimal timing of the strategic transitions (\( t^* \)) can be derived as follows:

*Take log transformation on both sides of equation [3]:*

\[
\ln[C_0 (1 + \beta)^t R_0 (1 + \gamma)^t I_0 (1 + \lambda)^t] = \ln[\frac{s_1 (1 + \alpha_1)^t N}{s_2 (1 + \alpha_2)^t}] \quad [4]
\]
From Equation 5, we can see that the optimal timing for a firm to switch from relational exchanges to arm’s-length transactions depends on complex interactions among different institutional dimensions, including national culture as well as those governing market competition, legal effectiveness, and information dissemination. Industry- and firm-level characteristics such as industry coordination benefits, firm network resource and relational capabilities are also relevant in determining the initial benefits and the expansion rate of relational exchanges. After deriving the optimal timing of the strategic transitions from relational transaction to arm’s-length transactions, the next step is to develop concrete theoretical predictions – as outlined in the following section.

2.4 Predictions

The optimal timing for the strategic transitions is contingent on informal institutions such as culture. Culture formulates behavioral expectations or beliefs about the
legitimacy and effectiveness of informal relationship-based control of transactions in a society, thus shifting the relative efficiency of relational transactions vis-à-vis arm’s-length transactions (North, 2005). In collectivistic cultures with high cooperative norms and values, such as Japan, the potential benefits from trading with network partners may be relatively higher than that in individualistic cultures with low cooperative norms, such as the United States. Hill (1995) looks into cultural norms and values to explain the pervasive use of relational networks in Japan, and argues that cooperative norms and values in Japanese firms greatly economize on transaction costs and consequently give Japan a competitive advantage of economic development. Given the relative stability of national culture, cooperative norms are likely to remain relatively efficient in constraining opportunistic behaviors for a fairly long period of time, while legal means are often the last resort for conflict resolution. This might explain why relational transactions are still pervasive in Japan, even though the effectiveness of its legal institutions is relatively high.

Consistent with this analysis, we derived the following comparative statistics regarding to $t^*$ (optimal timing) and $N$ (cooperative culture): $\frac{\partial t^*}{\partial N} > 0$. This leads to the following proposition:

**Proposition 1:** Ceteris paribus, the higher a country’s level of cooperative cultural norms and values, the later the optimal timing of the strategic transitions for firms in that country to transit from relational transactions to arm’s-length transactions.

As graphically summarized in Figure 2.2, the optimal timing ($t^*$) will be later for firms in collectivist cultures such as Japan than individualist cultures such as the United States.
The optimal timing for the strategic transitions is also contingent on formal institutions that enhance legal effectiveness, which directly determine the transaction costs of monitoring and enforcing impersonal transactions. A weak legal system favors strong personal ties and relational contracting as viable substitutes for formal legal contracts, which may restrict business opportunities and weaken competition. Empirical studies of manufacturing firms in Africa demonstrate that the absence of effective legal institutions in enforcing contracts has limited trade and market development (Collier & Gunning, 1999). Without efficient legal enforcement governing impersonal exchanges, firms are reluctant to move out of relational networks and local communities to exchange with strangers. For most emerging economies, the growth of exchange in both volume and complexity demands the development of formal market-supporting legal institutions. The institutional transitions involve extensive legislative processes to lay down the framework of formal legal and regulatory frameworks. Even though laws on the book could be transplanted relatively fast, the enforcement credibility takes much longer time to establish. Only the credible assurance from effective legal institutions can foster confidence over exchanges with strangers (Johnson et al., 2002), and make firms willing to explore new exchange opportunities outside relational networks. Cross-country differences in the legal origin, exchange scope, government capability and political power distributions lead to the heterogeneity of countries’ legal developments (World Bank, 2002), and consequently affect firms’ optimal timing of the strategic transitions. Consistent with this analysis, we derive the following comparative statistics from the model regarding the initial level of legal effectiveness ($R_0$) and the development speed
\( (\gamma) : \frac{\partial t^*}{\partial R_u} < 0, \frac{\partial t^*}{\partial \gamma} < 0 \). In other words:

**Proposition 2:** Ceteris paribus, the more developed a country’s legal institutions (determined by both the initial level of legal effectiveness and the speed of legal system development), the earlier the optimal timing of the strategic transitions for firms in that country to transit from relational transactions to arm’s-length transactions.

For example, the legal institutions in Singapore are much more developed than that in China (Kaufmann, Kraay, & Mastruzzi, 2005) and Singapore has a much higher level of judicial independence and a lower level of court corruption than China (see Table 2.1). Thus, assuming other things constant, the strategic transitions from relational transactions to arm’s-length exchanges are likely to be earlier for firms in Singapore than for those in China (see Figure 2.3).

The optimal timing for the strategic transitions is also contingent on formal institutions that encourage market competition, which affect the potential benefits of arm’s-length transactions and the opportunity costs of sticking to existing relational partners. Competition leads resources to chase the merits of products/service, instead of cultivating non-market, social or political relationships. Intensified competition may drive firms toward more arm’s-length transactions because the opportunity costs of sticking to network partners grow higher (Kohli & Jaworski, 1990). For example, competition in the supplier market increases the number of quality suppliers, thus reducing asset specificity. Such reduction of the bargaining power of suppliers makes arm’s-length transactions more efficient (Walker & Weber, 1984). Ahmadjian and Lincoln (2001) find that even Japanese auto manufacturers, famous for their interest in
working with keiretsu members, are gradually moving toward outsourcing components to competitive suppliers outside keiretsu networks, when facing global competition and standardization of technology. In another example, Marks and Spencer, which had strong relationships with UK suppliers for over two centuries, recently chose to buy from foreign suppliers when competition intensified in the UK market and better alternatives became available outside its traditional supply network (Pillai & Sharma, 2003).

Countries vary significantly in their original level and development speed of competition laws. The United States and Canada are among the first countries to introduce competition laws at the end of the 19th century, many European countries introduced them in the mid 1950s, and most emerging economies did not introduce them until the 1990s. The speed of deregulation also varies across countries and industries. Worldwide deregulation in the financial services, airlines, telecommunications, and many other industries generates more competitive transaction partners outside existing networks. With the development of competition institutions, the reliance on relational ties to do business is likely to decline over time. Consistent with this analysis, the comparative statistics derived from our model are as follows regarding the initial competition level \( (C_0) \) and the development speed \( (\beta) \):

\[
\frac{\partial t^*}{\partial C_0} < 0, \quad \frac{\partial t^*}{\partial \beta} < 0.
\]

Therefore, we predict:

**Proposition 3**: *Ceteris paribus, the more developed a country’s competition institutions (determined by both their initial level of competition institutions and the speed of improvement during the market-oriented institutional transitions), the earlier the optimal timing of the strategic transitions for firms in that country to transit from relational*
transactions to arm’s-length transactions.

For example, market competition institutions are more developed in Hungry than in Russia (Vagliasindi, 2001) and so do the local competition level and the ease of new business entry (see Table 2.1). As a result, holding other things constant, the strategic transitions from relational transactions to arm’s-length exchanges are likely to be earlier for firms in Hungry than for those in Russia (see Figure 2.4).

The optimal timing for the strategic transitions is contingent on formal institutions that reduce information problems. Poor quality of information-related institutions increases information asymmetry and chances of information distortion, consequently deterring arm’s-length transactions (Akerlof, 1970). Without good information, the search and monitoring costs will be very high for market transactions (Coase, 1937). Hayek (1945) and Akerlof (1970) also advocate that countries should invest in building up public information institutions to reduce the transaction costs for the whole society. The growth of emerging economies is often impeded by the poor information dissemination in the economic system. Poor accounting transparency and financial disclosure, unavailability of credit rating system, and weak institutions to verify quality all make transactions with players outside relational networks very costly and sometimes even impossible. As a result, transactions are limited within the boundaries of those trustworthy network members. Once the public information institutions become more established, and searching for price and quality information outside networks becomes reliable and efficient, firms are more likely to exchange with the best offer, instead of being constrained to the limited small network. Cross-country studies have found that the development of institutions in reducing information problems is positively correlated
with the volume of impersonal exchanges (World Bank, 1998). The comparative statistics derived from our model suggest the same results: $\frac{\partial t^*}{\partial I_0} < 0$, $\frac{\partial t^*}{\partial \lambda} < 0$ ($I_0$ stands for initial level of information institutions and $\lambda$ denotes the speed of development in information institutions). As a result,

**Proposition 4**: Ceteris paribus, the more developed a country’s institutions in reducing information problems (determined by both their initial level of institutions reducing information problems and the speed of improvement during the market-oriented institutional transitions), the earlier the optimal timing of the strategic transitions for firms in that country to transit from relational transactions to arm’s-length transactions.

For example (see Figure 2.5), information institutions such as the credit information collection and dissemination (Olegario, 2001) as well as business information availability and financial disclosure (see Table 2.1) are much more advanced in the United States than in Mexico. Therefore, holding other things constant, the strategic transitions from relational transactions to arm’s-length exchanges are likely to be earlier for firms in the United States than for those in Mexico.

The optimal timing for the strategic transitions is also contingent on the initial benefits of relational transactions, which may vary across firms and industries. At the firm level, the higher initial benefits could either result from the larger size of a firm’s initial network (e.g. incumbent firms vs. entrepreneur firms vs. foreign firms). Incumbent firms often enjoy higher initial network benefits than entrepreneurial firms and foreign firms. Firms enjoying higher benefits of relational networks may prefer to exploit existing relational networks to reduce transaction costs and may be reluctant to give up
existing relationships, so they tend to be slower in making the strategic transitions. In contrast, firms which lack intensive relational networks to start with would have less to lose but more to gain by exploring new exchange partners in response to the development of market-supporting institutions (Rajan & Zingales, 2003). As a result, new entrants (domestic start-ups and foreign entrants) will be faster in making the strategic transitions (Peng, 2003). At the industry level, industries featuring measurement uncertainty (e.g., technology intensive products) will enjoy higher initial benefits of relational transactions than mature industries (Ahmadjian & Lincoln, 2001). Finally, relational transactions are likely to be more beneficiary for industries that favor more network-based information or knowledge sharing and coordination flexibility (e.g. industries emphasizing process innovation and featuring demand uncertainty). Consistent with this analysis, the comparative statistics of the model regarding $s_1$ (initial network benefit) is $\frac{\partial s^*}{\partial s_1} > 0$.

In other words

*Proposition 5: Ceteris paribus, the higher the initial benefits of trading with network partners, the later the optimal timing of the strategic transitions for firms to switch from relational transactions to arm's-length transactions.*

An example would be the automobile industry versus the textile industry (see Figure 2.6). The benefits of within-network coordination may be more valuable for the former than for the latter, and firms in the automobile industry are likely to make the strategic transitions slower than firms in the textile industry.

In addition, the optimal timing for the strategic transitions is also contingent on the network expansion cost of relational transactions, which also vary across industries and firms. For example, the opportunity costs of forgoing opportunities outside relational
networks resulting from sticking to existing network partners will be higher for firms embedded in highly competitive environment such as computer industry than those in less competitive context such as the railroad industry (Burt et al., 2002; Uzzi, 1996). In addition, firms embedded in a more homogeneous community could expand networks more efficiently than those embedded in a heterogeneous community, where communication and social interactions are difficult. Moreover, firms with established relationship networks often need less resource to maintain the relationships than those firms which have to invest greatly to cultivate social ties for business transactions. Finally, the smaller network expansion costs may result from firms’ superior and inimitable resources that enable them to cultivate and maintain the network with lower costs (Dyer, 1996; Dyer & Singh, 1998). Therefore, the difference of network expansion costs will shift the optimal timing of the strategic transitions. Consistent with this analysis, our model predicts the optimal timing changes with $\alpha_2$, the network expansion rate,

$$\frac{\partial t^*}{\partial \alpha_2} < 0.$$  

In other words:

*Proposition 6: Ceteris paribus, the smaller the expansion rate of network costs over time, the later the optimal timing of the strategic transitions from relational transactions to arm’s-length transactions.*

For example, Toyota may switch from relational transactions to arm’s-length exchanges much slower than GM, given Toyota’s competitive advantage in managing relational networks with lower costs than GM (see Figure 2.7).

In a nutshell, the development in market-supporting institutions that encourage market competition, improve legal effectiveness, and reduce information problems may
gradually make arm’s-length transactions more beneficial than relational exchanges (North, 1990, 2005). However, high cooperative culture in some countries may add additional benefits of relational transactions and postpone the optimal timing to switch to arm’s-length transactions. In addition, firms in industries with high network coordination benefits, or those featuring demand and measurement uncertainty will be slower to switch from relational transactions to arm’s-length transactions. Finally, at the individual firm level, firms which enjoy strong relational capabilities will be slower than firms with poor social connections and relational capabilities in making the strategic transitions. Overall, institutional factors along with industry- and firm- characteristics will jointly determine the optimal timing for strategic transitions in emerging economies.

2.5 Discussion
2.5.1 Contributions and Implications

This article contributes to the literature in at least three aspects. First, it represents the first work, to the best of our knowledge, to formally model the multidimensional institutional factors that drive firms’ dynamic strategic choices from relational transactions to arm’s-length exchanges during institutional transitions – a process speculated but not specified by Peng (2003). Therefore, we add accuracy, precision, and richness to Peng’s (2003) coarse-grained, two-stage strategic transition framework by identifying when precisely the strategic transitions should occur and what are the institutional contingencies. The optimal timing of the strategic transitions in response to institutional changes is an important yet rarely examined strategic question in the literature. In this exploration, we highlight the path dependence and heterogeneity of
institutional transitions across countries. Overall, this article contributes to an institution-based view of business strategies by investigating how institutions matter through dynamic and comparative analyses of strategic choices during institutional transitions.

Second, this exploration also sheds light on how the transaction costs of different exchange strategies may differ when embedded in different institutional contexts, thus helping integrate the micro-level (transaction governance) and macro-level (institutional structure) approaches of the new institutional economics – a weak link in the existing literature (North, 2005; Williamson, 1991, 2000). By exploring this micro-macro interaction, the article helps bridge the research of relational transactions in developed economies with that in emerging economies. The literature on developed economies focuses on the micro-level transaction attributes and firm and industry characteristics, while the literature on emerging economies emphasizes the macro-level institutional weakness. We bridge the two bodies of literature by arguing that the micro-level transaction costs are intensified by the macro-level deficiency in market-supporting institutions. Specifically, the transaction costs of impersonal exchange related to information searching and quality verification are magnified by a country’s weak institutions. Similarly, the transaction costs of impersonal exchange related to monitoring and enforcing contracts are amplified when the legal institutions are poor. In addition, competition institutions create rich exchange opportunities outside local communities, and amplify the opportunity costs of sticking to limited relational networks. Therefore, this fine-grained analysis on the “shifting parameters” of institutions (Williamson, 1991) – beyond industry- and firm-level factors – holds much potential to bridge the two bodies of literature by providing a more comprehensive and unified theoretical framework.
Finally, this article contributes to the ongoing debate about the convergence and divergence of institutions and business practices. Our model explicitly predicts that the speed of convergence differs across countries due to the path dependence of institutional development. While we share the assumption with Peng (2003) that in response to expanded scale and scope of arm’s-length transactions, formal institutions supporting impersonal exchange may converge gradually, we follow North (2005) to maintain that informal institutions of culture remain nationally distinctive due to their “stickiness” (resistance to change). Since business strategy is affected by both formal and informal rules and incentives, we speculate the final equilibrium will be a compromise between convergence and divergence (see Chung, 2004). In other words, depending on the time window defined for observation, even though the formal institutions supporting rule-based impersonal exchange may converge in the long run, distinctive national culture may maintain consistent difference, thus keeping a certain level of difference in the choice of transaction governances (Peng, Lee, & Wang, 2005).

Our model has multiple implications for policy makers and practitioners. First, at the national institutional level, the model suggests that the institutional quality in encouraging market competition, reducing information problems, and safeguarding impersonal transactions has a fundamental impact on transaction costs. To reduce transaction costs and facilitate economic growth, governments should intentionally design and build efficient market-supporting institutions in a systematic way. Second, at the firm level, our model implies that managers should anticipate and adapt their strategies to the institutional changes to take advantage of new opportunities and avoid being trapped in old networks. However, the optimal timing of the strategic transitions
should be carefully analyzed taking into consideration formal institution development, informal norms, as well as firms’ own resources and industry contexts. In the end, most firms need to manage a portfolio balancing relational vis-à-vis arm’s-length transactions according to these contingencies. This may be especially important for multinationals operating in both developed and emerging economies. Effectively managing both kinds of transactions will be crucial (Lovett, Simmons, & Kali, 1999; Wagner & Johnson, 2004).

2.5.2 Limitations and Future Directions

While our model tries to integrate both formal and informal institutions to investigate the institutional contingencies for the emergence, proliferation, and (possible) decline of relational transactions, it remains controversial whether formal institution substitutes or complements the informal institutions (Zenger, Lazzarini, & Poppo, 2002). The “substitutes” group may argue that informal mechanisms such as relational contract will be gradually crowded out by formal rules when the voids of formal institutions are filled over time. Following this camp, our model predicts that the relational orientation will decrease when formal institutions develop. The “complements” group, in contrast, suggests that “the difference between informal and formal constraints is one of degree” (North, 1990: 46). It argues that formal rules will provide more safeguards for informal mechanisms rather than crowding them out and that effective formal institutions further reduce the potential gains of playing opportunism, hence the costs of violating informal norms will go up (Zenger et al., 2002). Our model provides limited insights in resolving this controversy and calls for future work to deepen our understanding on this debate.
Moreover, how formal and informal institutions interact is another interesting area to investigate. North (2005) recently argues that relational exchange is part of our genetic heritage because of the long tradition of such exchange dating back to the hunter/gather days of human history when all exchange was local within a small group (such as a village). On the other hand, arm’s-length transaction – in other words, “trust strangers” – requires “fundamental rethinking at odds with our genetic heritage” (North, 2005: 84). If that is the case, it is intriguing to examine how certain cultures, against such odds, develop more effective institutions to facilitate “unnatural” impersonal exchange. For example, Greif (1994) argues that individualistic cultures tend to use more rules of law (formal institutions) to mitigate opportunistic behavior, while collectivistic cultures are more likely to use collective norms or sanctions, and are inherently more difficult to develop effective rules of law. Parsons (1991) also points out that culture particularism and universalism have a fundamental influence on the development of rational rules of laws and universalism cultures are much easier to develop effective impersonal institutions. Given the complex interactions between the formal and informal institutions, how to design the appropriate formal rules that fit with the embedded culture and how the cultural changes affect the transformation of formal rules are still not well understood.

Third, the processes and mechanisms to build effective institutions deserve more attention for future studies. The persistence of poor institutions around world has been a big puzzle (North, 1990). For organization researchers, how organizations reciprocally affect the development of institutions in emerging economies is not well understood. It will be valuable to understand the feedback link from organizations to institutions.
Finally, our model of strategic transitions is based on the cost-benefit analysis of arm’s-length vis-à-vis relational transactions, highlighting the economic rationality of maximizing transaction values and reducing transaction costs. While this economic rationality approach has the advantage of parsimoniousness, it may present an under-socialized picture of strategic transitions (Granovetter, 1985). Future work may incorporate social (or other non-economic) benefits in transaction decisions. In addition, for relational transactions, we do not distinguish the difference between strong and weak ties (Granovetter, 1973). A further examination of strong-tie- versus weak-tie-based transactions (Peng & Zhou, 2005) may enrich our model.

2.5.3 Conclusion

The central prediction from our model is that the optimal timing for firms to switch from relational transactions to arm’s-length exchanges varies significantly across countries, depending on the informal cultural contexts and formal institutional development supporting impersonal exchanges. Specifically, the development of institutions encouraging market competition, reducing information problems, and enhancing legal effectiveness is the core of market-oriented institutional transitions. While we agree with Peng (2003) in the general trend of market-oriented transitions in many emerging economies, we believe that the path-dependence character of various forms and shapes of institutional transitions around the world should be emphasized. It is our contention that institutional transitions significantly shape the cross-country variations in the optimal timing of firms’ strategic transitions from relational to arm’s-length transactions.
Net benefits of arm’s-length transactions

Net benefits of relational transactions

Relative benefits of arm’s-length transactions over relational transactions

Figure 2.1: The optimal timing of the transitions from relational to arm’s-length

Net benefits

Net benefits of arm’s-length transactions

Net benefits of relational transactions

– Collectivist (e.g. Japan)

– Individualist (e.g. U.S.)

Figure 2.2: The optimal timing, $t^*$ shifts with high or low cooperative

35
Figure 2.3: The optimal timing, $t^*$ shifts with the legal effectiveness.

Figure 2.4: The optimal timing, $t^*$ shifts with high or low level of competition.
Figure 2.5: The optimal timing, $t^*$ shifts with the quality of information

- higher quality of information institutions (e.g. U.S.)
- lower quality of information institutions (e.g. Mexico)

Net benefits of arm’s-length transactions

Net benefits of relational transactions

Figure 2.6: The optimal timing, $t^*$ shifts with industry characteristics

Net benefits of arm’s-length transactions

Net benefits of relational transactions

- Industry with less network benefit (e.g. textile)
- Industry with more network benefit (e.g. automobile)
Net benefits of arm’s-length transactions

Net benefits of relational transactions

- higher relational capability (e.g. Toyota)
- lower relational capability (e.g. GM)

Figure 2.7: The optimal timing, t*, shifts for firms with the relational capabilities

<table>
<thead>
<tr>
<th>Country</th>
<th>Legal institutions</th>
<th>Competition institutions</th>
<th>Information institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Judicial independence</td>
<td>Court corruption</td>
<td>Local competition</td>
</tr>
<tr>
<td>Singapore</td>
<td>5.4</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>3.0</td>
<td>3.4</td>
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<tr>
<td>Hungary</td>
<td></td>
<td>5.2</td>
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<td>Russia</td>
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<td>3.9</td>
<td>3.1</td>
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<tr>
<td>U.S.</td>
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<tr>
<td>Mexico</td>
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</tbody>
</table>

* Source: Global Competitive Report 2000. Higher scores (on a 1-7 scale) represent higher quality of a country’s market-supporting institutions. These countries are those discussed in Figure 3 to 5.

Table 2.1: Country Scores on Formal Institutions
CHAPTER 3

BRIBERY STRATEGY AROUND THE WORLD:
INSTITUTIONAL ANTECEDENTS AND GROWTH CONSEQUENCES

3.1 Introduction

Governments exert important influences on business policy and resource control over firms. How do firms’ political strategies vary in response to diverse institutional qualities across countries? Resource dependence theory suggests that firms attempt to manage their dependence on government to reduce policy uncertainty and resource constraints (Pfeffer & Salancik, 1978). Managing the dependence on government can either be a legitimate way of influencing political decision making and enhancing firms’ competitive advantage (Baron, 1995; Boddewyn & Brewer, 1994; McWilliams, Van Fleet, & Cory, 2002; Shaffer, 1995; Ring, Bigley, D’Aunno, & Khanna, 2005), or an illegitimate means of bribery and corruption (Habib & Zurawicki, 2002; Hellman, Jones, & Kaufmann, 2003; Wei, 2000). Among all kinds of political strategies such as lobbying and personal service, bribery is an important yet overlooked political strategy in the literature. We know relatively little about firm-level bribery decision and its performance implications, and we know even less on how bribery varies across different countries. Researchers are typically constrained by the lack of firm-level cross-country data on this political strategy.

Prior research has extended resource dependence theory in studying strategic
adaptations of organizational networks (Provan, Beyer, & Kruytbosch, 1980), organizational structure (Tolbert, 1985), board compositions (Boyd, 1990; Hillman & Dalziel, 2003), and mergers and acquisitions (Pfeffer, 1972; Casciaro & Piskorki, 2005). These studies contribute substantially to our understanding of strategies that manage interfirm resource dependence. However, the implications of resource dependence theory on strategies that manage resource dependence on the government remain largely underexplored in the literature. Governments often monopolize and control a variety of crucial resources such as business licenses, subsidies, tax benefits, and natural resources that are of great importance for firms’ survival. Managing the dependence on the government may be significantly different from managing the inter-firm dependence (Banfield, 1975; Murphy, Shleifer & Vishny, 1993). For example, compared with the resource dependence on other firms, the dependence on the government features much larger concentration of power in the hands of the government officials. And traditional strategies managing interfirm dependence such as internalization or diversification are not applicable to the challenge of managing the dependence on the government. While there are many ways of managing firms’ dependence on the government, bribery is an often used but rarely investigated strategy due to its dubious nature. Therefore, an investigation on firms’ bribery strategy may offer new theoretical and empirical insights to resource dependence theory when there is huge power imbalance in resource dependence.

In addition, the performance implications of resource dependence theory have been assumed to be positive if firms can reduce the dependence on others. We argue that the benefits of managing dependence have to be weighed against the corresponding costs in order to predict the performance impact of a certain strategy. Neglecting the cost side
of managing dependence only leads to a partial picture of resource dependence theory. Firms may be successful in reducing the external dependence through a variety of business or political strategies. However, the resulting performance may not necessarily be positive when the cost of managing dependence is also high. This point is particularly relevant for implementing a political strategy like bribery, because the secrecy and arbitrariness associated with bribery/corruption often demands high costs (Murphy, Shleifer & Vishny, 1993). Therefore, by taking the cost into consideration, this study may contribute to resource dependence theory by examining the performance implications of managing dependence.

Finally, because of a lack of cross-country data, most of the existing empirical studies on resource dependence theory have been constrained to a single country context (Boyd, 1990; Casciaro & Piskorki, 2005; Peng & Luo, 2000). Hence, little has been known whether the theoretical logic is generalizable across countries with different institutional environments. The institutional-based view (North, 1990; Peng & Heath, 1996) argues that countries differ in both the formal and informal institutions, which specify “the rules of the game” and shape the incentives and constraints of firms’ strategic choices. Therefore, when firms are embedded in countries where the relative power of the government over the market in resource allocation is different, their strategic choices may also differ. By investigating these institutional antecedents, this study extends the resource dependence theory to broader institutional contexts.

The purpose of this study therefore is to extend resource dependence theory by examining the important, yet overlooked political strategy, bribery, in a cross-country context. We seek to integrate resource dependence theory as well as institution-based
view (North, 1990; Peng & Heath, 1996) to explain how institutions affect firms’
dependence level on governments and consequently their strategic choices and
performance. Drawing on large-sample, cross-country data from the World Bank on
2,686 firms across 48 countries, this study directly investigates two related questions: (1)
Does firms’ level of bribery vary systematically according to the quality of market-
supporting institutions in different countries? (2) Does a high level of bribery help
facilitate firm growth? Specifically, we analyze how institutions matter along four
dimensions: financial market development, government regulation, policy uncertainty,
and the quality of legal system. We then take a contingency approach to investigate the
performance consequences of bribery strategy on firm growth. Overall, we attempt to go
beyond the general argument that institutions matter and use in-depth analyses to dig into
how it matters and in what specific ways.

3.2 Institutional Variation, Resource Dependence and Bribery

Resource dependence theory (Pfeffer & Salancik, 1978) suggests that no
organization is in complete control of the resources it needs. Therefore, organizational
survival and success come when the organization actively manages its resource
dependence and copes well with external demands. The level of resource dependence is
contingent on the scope of resources needed, the criticality of the resources and the
concentration of resource control.

Although the scope or criticality of the resources controlled by the government
varies in different countries, ranging from business entry to tax benefits, the monopoly
power of government is almost universal around the world. Given such power imbalance
between the government and firms, some traditional strategies that manage interfirm
dependence such as reducing uncertainty by cultivating multiple suppliers, absorbing
uncertainty by mergers and acquisitions or reducing resource dependence by
diversification are not applicable. As a result, a variety of political strategies emerge.
Managing the dependence on the government can either be legitimately influencing
political decision making and enhancing firms’ competitive advantage (Baron, 1995;
Boddewyn & Brewer, 1994; McWilliams, Van Fleet, & Cory, 2002; Shaffer, 1995; Ring,
Bigley, D’Aunno, & Khanna, 2005), or take an illegitimate form of bribery (Habib &
Zurawicki, 2002; Hellman, Jones, & Kaufmann, 2003; Meyer, 2005; Wei, 2000).

Among various political strategies, bribery is an important, widely used yet often
overlooked political strategy in the literature. Bribery, voluntary or involuntary, is almost
universal in every country, yet the pervasiveness and arbitrariness of bribery vary
tremendously across countries (Rodriguez, Uhlenbruck, & Eden, 2005; Shleifer &
Vishny, 1993). Favorable business policies may be purchased in a political market, where
demand and supply for them determine the final equilibrium (Boddewyn, 1988). Yet we
know relatively little about firm-level bribery decisions and their performance
implications, and we know even less on how bribery varies across different countries.
The following section integrates resource dependence theory (Pfeffer & Salancik, 1978)
and institution-based view (North, 1990; Peng & Heath, 1996) to investigate the cross-
country variations in firms’ level of bribery.

3.3 Hypotheses
Institutions are the “rules of the game,” which spell out the benefits and costs of a particular strategy (North, 1990). The institutional framework that defines the relationship between governments and firms is probably one of the most distinguishing characteristics of different business systems (Whitley, 1994) because it defines whether the market or the state holds power for resource allocation (Pistor & Wellons, 1999) and the degree of economic liberalization (Melo et al. 1996). The institutional root of high resource dependence on governments often results from poor market-supporting institutions and consequently high discretionary power of government officials on resource allocation. Resource dependence theory suggests that discretion over the use of valuable resources, information and the ability to make rules and enforce rules are the main sources of resource dependence (Pfeffer & Salancik, 1978: 145-146). If the market-supporting institutions are weak, government agents may take control over resource and information, and law and regulations are subject to high discretion of government officials. The higher discretionary power government agents have, the more opportunities for them to abuse the power for private benefits and solicit illegal payments from firms (Bansfield, 1975; Murphy, Shleifer & Vishny, 1993).

Institutional frameworks vary tremendously around the world. However, simply acknowledging that “Institutions differ” does not get us very far (Powell, 1996). In other words, knowing the formal market-supporting institutions in emerging economies are underdeveloped — relative to those in developed economies — does not inform us on how institutions differ across countries. Therefore, it is necessary to move our focus from a coarse-grained proposition that “Institutions differ” to a finer-grained understanding of the underlying dimensions underpinning the institutional differences, which may impact
firms’ strategic choices and performance differently.

Institutions have many dimensions (North, 2000, Whitley; 1994), which may trigger different political strategies. A number of scholars have conceptualized the institutional factors that may lead to the variations on political strategies across countries, such as the voids of formal institutional rules (Khanna & Palepu, 1997; Xin & Pearce, 1996), personalized bureaucratic administrations (Boisot & Child 1996), government control over resources (Nee, 1992; Child & Lu, 1996), government intervention in firms’ operations (Alhstrom, Bruton, & Liu, 2000; Carney, 2004), and the availability and effectiveness of business laws (Amsden, Kochanowicz, & Taylor 1994; Pistor, Raiser, & Gelfer, 2000). From a resource dependence standpoint, we suggest that countries systematically differ in the following four institutional dimensions — (1) financial market development, (2) government regulation, (3) policy uncertainty, (4) the quality of legal system. These dimensions represent different sources of controlling power in resource dependence theory: discretion over the use of valuable resource, control of important information, the power to make the rules and enforce the rules (Pfeffer & Salancik, 1978: 145-146). Therefore the institutional differences on these dimensions determine the government’s controlling power over firms and consequently their incentives to adopt a political strategy such as bribery. Firms are likely to intensify their political activities in countries where the resource dependence on the government has significant consequences on their survival and success. The next section spells out our hypotheses in more detail.
3.3.1 Four Dimensions of Institutional Differences

*Financial Market Development.* First, financial capital is one of the key resources for firm growth (Levine, 1991). In many emerging economies, financial markets such as commercial banking systems and securities markets are not well established (La Porta, Lopez-de-Silanes, & Shleifer, 2002). For example, although the proportion of state-owned banks is decreasing in many countries due to privatization, there are still a considerable number of government-controlled banks, from which firms may obtain cheaper capital than from the market if they can get preferential treatment from government officials. Such preferential treatment of course is not obtained for free. Instead it is often exchanged through a political market via bribery (Boddewyn, 1988). In countries with restrictions on private and foreign bank operations, this capital dependence on the government is even larger, which further provides rent-seeking opportunities for government officials (World Bank, 1997). By the same token, when the securities markets are under strong governmental influences (for example, government officials control the securities registration), firms with intentions to raise capital on the market may also have to bribe government officials just to get the permission to be listed on the security markets. Therefore:

*Hypothesis 1: The lower the level of financial market development, the higher the level of bribes paid by firms to government officials.*

*Government Regulation.* Heavy government regulations on land, raw materials, licensing for business entry, subsidies and taxes lead to even more resource dependence of firms on the government (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002; Child & Lu, 1996). The power of government officials in allocating these valuable
resources under their discretion creates rich opportunities for rent seeking (Murphy, Shleifer, & Vishny, 1993). Accessing valuable resources under government control is one of the most important benefits of political connections (Peng & Luo, 2000). A high level of resource dependence on government naturally triggers the necessity and enhances the benefits of strong relationships with government officials (Fisman, 2001; Xin & Pearce, 1996). And bribery is often one of important tools to circumvent those regulations and access government controlled resources (Habib & Zurawicki, 2002; Wei, 2000).

Therefore:

_Hypothesis 2: The higher the level of government regulation, the higher the level of bribes paid by firms to government officials._

_Policy Uncertainty._ Uncertainty over government policy is another important institutional factor. Accessing timely information over relevant government policy is an important function of political strategy (Kreiner & Brambri, 1993). In many emerging economies, business policies are usually not well codified (Boisot & Child, 1996), thus making them difficult to predict. Moreover, business regulations are often subject to constant change, making it difficult, if not impossible, for long-term business planning.¹ Facing such tremendous uncertainty and complexity, it is not surprising that firms are interested in forming strong relationships with government officials to get an “inside scoop” in order to reduce uncertainty. Corruption and bribery is the speedy way to obtain timely information. And it helps firms to reduce the level of uncertainty and gives the firm certain assurance to learn about new policies before other competitors. Overall, in the

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¹ For example, in the newly independent Baltic state of Lithuania, a total of approximately 3,200 new laws were passed between 1991 and 1996. Many of these laws were not well prepared and were amended frequently. The value-added tax law, for instance, was amended 18 times over four years (Kriauciunas, 2006: 172). This experience is not alone among many emerging economies going through rapid institutional transitions.
absence of predictable government policy, accessing reliable policy information on a timely basis via bribery or gifts has been common in many countries. Thus:

*Hypothesis 3: The higher the level of policy uncertainty, the higher the level of bribes paid by firms to government officials.*

*Legal System.* Although government control of financial resources, regulations and policy information create pervasive opportunities for rent-seeking, government officials’ actual abuse of power depends highly on the probability of being caught and the magnitude of punishment (Shleifer & Vishny, 1993). An effective and independent judicial system is crucial in monitoring government officials and deterring corruption. The effectiveness of a legal system is also important in reducing the transactions cost of business exchanges (Williamson, 1985). Low transparency in laws and regulations governing business transactions may push firms to rely on bribing government officials for information, advice, and protection. If the legal interpretation is subject to government officials’ personal discretion, bribery strategy is often economically rational to get a favorable treatment (Pistor et al., 2000). Therefore, a predictable transaction environment also requires effective, predictable, and independent enforcement of business laws (Amsden et al. 1994). Cross-country comparisons demonstrate much greater variation in the effectiveness of laws. For example, about 75% of managers surveyed in Russia and other former Soviet Union countries doubt the effective enforcement of business laws and the independence of the judicial system (EBRD, 1999). As long as the enforcement of laws is highly discretionary, and the monitoring institutions over law enforcement officials is weak, firms will find it optimal to rely on bribery in exchanging for favorable treatments. Therefore:
Hypothesis 4: The lower the quality of the legal system, the higher the level of bribes paid by firms to government officials.

3.3.2 Bribery and Firm Growth

Having identified the institutional differences which affect the level of monetary investment in bribing government officials, we address the next question: What are the performance implications of bribery? Resource dependence theory seems implied that managing dependence successfully will lead to a positive performance impact. However, it is costly to implement either political strategies such as bribery or business strategies such as acquisitions. Without adequate consideration of the cost side of managing dependence, one may only get a partial picture of managing resource dependence, and the strategic recommendation based on such an incomplete understanding may not yield the predicted performance. We tackle this issue by investigating the performance impacts of bribery strategy.

According to resource dependence theory, since bribery help firms access financial capital, policy information and overcome burdensome regulations and weak legal system, bribery should help firm growth. In both developed economies and emerging economies, the literature is sketchy on the direct performance impact of bribery on government officials, largely because of the difficulty in obtaining empirical data on firm-level bribery and also in isolating its effect on firm performance. However, some empirical work in the strategy literature on the impact of political connections on firm performance may shed light on this issue. In Indonesia, where corruption had been pervasive and predictable, Fisman (2001) finds that firms’ market values are highly
correlated with their connections with top government officials. In China, the few studies which focused on performance show that ties with government officials (some of which may be bribery-based) have a positive effect on performance in general, although they may not be sufficient without a competitive advantage in market-based capabilities (Park & Luo, 2001; Peng & Luo, 2000). In Central and East Europe, Hellman, Jones, & Kaufmann (2003) demonstrate that good connections with government officials, often featured by corruption bring huge advantages to entrenched firms. Since bribery is an important means to build up good connections with government officials in many countries, we may infer from these studies about the potential positive effect of bribery on firm performance. Overall, despite the relatively sketchy evidence on the direct evidence of bribery on firm performance, there is reason to believe that:

*Hypothesis 5a: Bribes by firms to government officials have a positive effect on firm growth.*

Contrary to the strategy literature above, which emphasizing the benefits of managing resource dependence via political connections, the institutional economics literature documented the high costs of managing the dependence on the government when the market-supporting institutions are poor. Empirical evidence suggests that high levels of corruption impose high cost for business and hurt firms’ performance instead (Djankov et al., 2002; Wei, 2000). The monopoly power of governments gives government officials the opportunities to extract private benefit by abusing their discretionary power and exert high cost on business firms (Bansfield, 1975; Murphy, Shleifer & Vishny, 1993). This literature considers bribery not as a strategic choice to improve firm performance, but as an involuntary “tax” imposed by greedy government
officials in poor institutional environments. Shleifer and Vishny’s (1993) political market model shows that, due to the secrecy of corruption, corruption is even more costly than tax. This type of coercive bribery drains firms’ financial resources and impedes economic growth (Mauro, 1995; Wei, 2000). Poor institutions breed more corruption, and increase firms’ costs of obtaining business license, settling business litigation, and accessing financial capital and policy information (World Bank, 1997). Consequently, firm growth is hindered. Therefore, as an alternative to Hypothesis 5a, we propose that:

_Hypothesis 5b: Bribes by firms to government officials have a negative effect on firm growth._

The third approach rejects the universal positive or negative effect of bribery on firm performance. Instead, when consolidating the two opposite perspectives on both the benefits and costs of managing the dependence on the government, it may well be that the net benefit of bribery may differ for different firms. Small firms may be more vulnerable to poor institutional quality than large firms (Xin & Pearce, 1996). The liability of “smallness” in business competition under poor institutional structure ranges from lacking access to financial capital when the financial market is underdeveloped (Beck, Demirguc-Kunt, & Maksimovic, 2005), to higher risk of government interference and expropriation when legal institutions especially property right protections are weak (Ahlstrom, Bruton, & Lui, 2002; Xin & Peace, 1996). Therefore, small firms, due to their weak bargaining power, often have little choices facing government officials’ rent-seeking activities of all kinds and may be coerced to undertake bribery. In addition, constrained by the limited resources, small firms are likely to be hit much more harshly than large firms, because the same amount of bribery money drains a much larger portion
of resources for small firms than for large firms.

Large firms, on the other hand, have more resources in their “deep pocket” and are likely to have more established connections with government officials (Peng, 2003). Moreover, large firms may enjoy economy of scale in bribery investment to establish good relationships with government officials and to gain tremendous benefit from favorable policy or decisions (Hellman & Schankerman, 2000). Hellman, Jones & Kaufmann (2003) shows that entrenched large firms with good political connections may even capture the state, and derive private benefits by distorting state policies and imposing high costs on small firms. Therefore, integrating the benefits and costs sides of managing the dependence on the government, we would expect that:

*Hypothesis 5c: Bribes by firms to government officials have a positive effect on firm growth for large firms, and a negative effect for small firms.*

3.4 Methodology

3.4.1 Sample

Our sample was drawn from the World Business Environment Survey (WBES) conducted by the World Bank.² It used a uniform core questionnaire (in local languages) administrated in enterprises in 81 countries during 1999-2000. The questionnaires were distributed to general managers or owners of a firm, who were interviewed face to face by trained interviewers. It surveyed senior managers’ perceptions about key constraints in the business environment that affect their business decisions (Batra, Kaufmann & Stone, 2003). Given the sensitive nature of the research questions of the survey, written

assurance of the confidentiality of their response from World Bank were issued. This WBES data provides one of the best datasets available in the country-level comparisons of business environment and activities and it has been used by several academic studies so far (Beck, Demirguc-Kunt & Maksimovic, 2005; Djankov, La Porta, Lopez-De-Silanes, & Shleifer, 2003; Uhlenbruck, Rodriguez, Doh & Eden, 2006). It also provides valuable firm-level evidence of bribery, instead of country-level aggregate analysis as is often the case in institutional economics literature ((Djankov et al., 2002; Mauro, 1995). Therefore, we do not need to infer from aggregate country analysis to individual firms, which may be problematic because of ecological fallacy (Robinson, 1950).

The number of firms surveyed varied by the size of a country and the budget, but usually at least 100 firms in each country. A total of 10,032 firms were pooled together across 81 countries in the 1999-2000 WBES data. For this study, several data selection criteria have been applied for hypotheses testing. First, observations with missing values on bribery or institutional variables related hypotheses are excluded. Second, countries with less than 16 firms were also excluded due to the lack of a sufficient degree of freedom for model estimation. The final sample for the present article was composed of a total of 2686 firms from 48 countries (see Tables 3.1 and 3.2). Even with these restrictions, however, this large, cross-country sample still compares very favorably with most previous studies (Fisman, 2001; Peng & Luo, 2000), which typically take place in only one country with a much smaller sample (several hundred firms), whose cross-country generalizability is difficult to establish.
3.4.2 Measurements

Dependent Variables

*Level of bribery* was operationalized as the amount of money a firm spent in bribing government officials, measured by the percentage of sales used as bribery payments to government officials. *Firm growth* was measured as a firm’s sales growth over the past three years. Sales growth has been found to be positively associated with ties with government officials (Park & Luo, 2001; Peng & Luo, 2000). While other firm performance measures (such as ROI) may be interesting, unfortunately, due to the data constraints (e.g. the high level of missing data on investment growth, the only alternative growth measure available in the data), we were not able to access data on other interesting performance measures.

Explanatory Variables

The measurement of the four institutional variables was based on the perception of senior managers about the corresponding dimension of institutional constraints in each country in the WBES survey. The individual managers’ perception scores were averaged into *country level* scores since we were interested in the effect a country’s general business environment on bribery, not individual perception. And by this aggregated measure, we also to a large extent mitigated a natural problem associated with the perception data: managers who overcome the institutional weakness through bribery may under-report the institutional barriers.

Each institutional variable was a composite measure of multiple related data items. As shown in Table 3.3, *financial market development* was an aggregated measure of five financial obstacles. On a 1-4 scale (the higher the scores, the worse the institutions), firms
assessed the financial obstacles in terms of (a) lack of access to non-bank equity, (b) lack of long-term loans, (c) banks lack of money to lend, (d) lack of access to foreign banks, and (e) lack of credit financing. A Cronbach’s alpha of 0.88 demonstrates a high consistency across these items. Government regulation was measured by regulatory obstacles on (a) business licensing, (b) customs regulation, (c) labor regulation, and (d) foreign exchange regulation. These items have a Cronbach’s alpha of 0.67. Policy uncertainty was measured on a 1-6 scale by the extent to which (a) legal, regulatory policy and (b) economic and financial policy are predictable, with a Cronbach’s alpha of 0.87. Finally, quality of legal system was measured by the composite of (a) enforceability of courts’ decisions, (b) fairness and impartiality of courts, and (c) consistency of courts’ decisions, each on a 1-6 scale. The Cronbach’s alpha for these three items is 0.74.

In the WBES data, there are many more data items related to the four institutional variables. These items described above were selected by conducting a factor analysis (see Table 3.4) to assure the internal consistency and validity of these variables (Hair, Anderson, Tathan, & Black, 1998). The overall measure of sampling adequacy of the factor analysis is 0.86, indicating a good representation of the sample. The four eigenvalues greater than 1 are 3.8, 2.0, 1.6, and 1.2, indicating a four-factor model. The scree plot provides further support for the four-factor approach. The Chi-square for the four-factor model is 607.3 (p<0.001). Table 4.4 demonstrates a clear pattern of factor loadings on these four factors: financial market, government regulation, policy uncertainty, and legal system. These four factors are also readily interpretable, and hence theoretically appealing.
Control Variables

Four firm characteristics that may affect firms’ political strategy were controlled in the model. Specifically, firm size was measured by the number of employees. Two dummy variables of firm size are *small firms* (5-50 employees) and *large firms* (more than 500 employees), with medium size firms (51-500 employees) as the benchmark. *Firm age* was measured as the number of years after a firm was established. Firm ownership was measured by two dummy variables *government ownership* and *foreign ownership* with private local firms as the benchmark, according to the identity of the controlling shareholder. Industry effects were controlled by four dummy variables: *manufacturing*, *service*, *agriculture*, and *construction*, with other industries as the benchmark. Finally, country GDP growth was also controlled since firms in high GDP growth countries are likely to experience high firm growth (see Table 3.3 for details).

3.4.3 Econometric Issues

We used two distinct methodologies to test our hypotheses and to check robustness of our results. Generalized Least Square (GLS) regressions and Hierarchical Linear Model (HLM) ((Raundenbush & Bryk, 2002) were used to test the hypotheses, given the nested nature of the data (firms nested within countries). Further, when testing the relationship between level of bribery and firm growth, GLS regressions of level of bribery and firm performance were simultaneously estimated to correct for the endogenous nature of bribery choices. Finally, institutional measures from other data sources such as Global Competitive Report were also utilized to avoid the common
method problem and to further check the robustness of the results. Each of these points is discussed below.

These estimation methods were chosen based on the following three econometric issues. The first is the ecological correlation problem – firms within the same countries are embedded in the same institutional environment. This makes the assumption of independence across observations questionable. Either country fixed effects or random effects model may be appropriate to deal with this type of error structure. However, the country fixed effects model absorbs the country-specific effects simply into country dummy variables and wipes out the effect of other country-level variables (Kennedy, 2003). The country random effects model, on the other hand, does allow the model to contain other country-level variables, while fixed effects model does not. Therefore, given our main theoretical interest in country-level institutional variables, the GLS country random effect model is more appropriate. The drawback of using random effects model is that the estimation may not be consistent, since it depends on the critical assumption that the unobservable country effects are uncorrelated with the included variables (Greene, 2003). To check the robustness of the results of the random effects model, we also analyzed the data with HLM, established software for nested hierarchical structure data.

Second, in estimating the relationship between level of bribery and firm growth, the independent variable, level of bribery, is endogenously determined by the system (both firm-level or country-level factors). Hence the classical OLS assumption of exogenous independent variables is violated. Under this situation, the simultaneous equations method controlling for the endogeneity of bribery decision is more appropriate
(Greene, 2003). So we conducted a generalized two stage least square model: the first stage was a random effect estimation of level of bribery, and the second stage, a random effect model of firm growth using the predicted value of level of bribery from the first stage estimation. The GLS simultaneous equation specification therefore deals with both the endogeneity of level of bribery variable and the correlated error structures for firms nested in the same country.

Finally, as is common to most survey-based studies, we had both our dependent and independent variables from the same survey, which had a potential common method problem. To control for this problem, we conducted a robustness analysis by using an alternate source, the Global Competitiveness Report (2000), to measure the four institutional variables in this study.

3.5 Findings

3.5.1 The Impact of Institutional Variation

Table 3.5 presents descriptive statistics and the correlation matrix. We can see that institutional variables such as financial market development, government regulation, policy uncertainty, and the quality of legal system (the higher value of these variables, the lower quality of corresponding institutions) are all significantly correlated with level of bribery. The four institutional variables are also correlated (\( \rho \) ranges from 0.05 to 0.63), suggesting a certain level of relatedness among them. The Cronbach’s alpha for the four institutional variables is low, approximately 0.28, which indicates that the four variables tap into relatively distinctive (although not completely mutually exclusive) institutional domains. Finally, the firm growth measure, sales growth, does not seem to be highly
correlated with institutional variables ($r < -0.10$).

Table 3.6 presents the results of multivariate GLS regression of level of bribery on the institutional variables, controlling for country random effect. Model (1) is the control model from which we could see that large firms spend a significantly smaller portion of money (relative to their sales) on bribery than small and medium size firms ($p<0.01$). And firms with foreign ownership invest a significantly less amount of money in bribing government officials than local private (the omitted ownership dummy as the benchmark category) and government-owned firms ($p < 0.05$). This may probably be due to foreign firms’ less dependence on the government given their rich financial and technological resources and market-based competency. Finally, the agriculture industry has significantly less level of bribery compared with other industries ($p < 0.05$).

Models (2) to (5) in Table 3.6 test the effect of the four institutional variables (the higher the scores, the worse the institutions) on level of bribery. The results demonstrate that poorer financial market development ($p < 0.01$), higher policy uncertainty ($p < 0.01$), and lower quality of legal system ($p < 0.01$) do significantly increase firms’ monetary resources spent in bribing government officials as suggested by Hypotheses 1, 2, and 4, respectively. The data support the view that low quality of formal market-supporting institutions may increase firms’ resource dependence on governments, which consequently creates more opportunities for bribery and corruption. The findings also suggest that the effect of institutions on bribery seems quite generalizable across countries. The only institutional variable that is not significant is government regulation, thus no evidence is found for Hypothesis 3. In the section on cross-sample robustness

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3 The four theoretical constructs are also regressed on the amount of time senior managers spent with government agents (not reported here). We found that low quality in the four institutional dimensions also significantly increases senior managers’ time spent in cultivating ties with government agents.
analysis, we will speculate the potential reasons for the insignificant effect of government regulation.

Model (6) in Table 3.6 shows the results when pooling the four institutional variables in the same regression model. While the coefficients on financial market and policy uncertainty remain significantly positive, the coefficient on legal system becomes insignificant. The change may result from the multicollinearity problem since the four institutional dimensions are correlated with each other in varying degrees (see Table 3.5). To circumvent this problem, we constructed a composite measure of institutions by aggregating the four institutional dimensions into an overall institution score (the higher the score, the worse the institutions) and regressed in model (7). The results in model (7) suggest that higher level of institutional development is significantly associated with lower level of bribery (p<0.01).

3.5.2 Implications for Firm growth

Model (1) to (3) in Table 3.7 tests the relationship between level of bribery and firm growth (Hypothesis 5a to 5c). Model (1) is the control model, which shows that younger firms grow significantly faster than older ones (p < 0.01), and government-owned firms grows marginally slower than foreign firms and private firms (p < 0.1).

Model (2) tests the main effect of level of bribery on firms’ sales growth. To control for the endogeneity of level of bribery, we conducted a generalized two stage least square model: the first stage was a random effect estimation of level of bribery as shown in model (6) of Table 3.6, and then put the predicted value of level of bribery, Bribe (p), from the first stage estimation into the second stage model of firm growth.
From the two stage GLS regression, we find a significantly negative relationship (p<0.01) between level of bribery and firm growth when controlling the endogeneity of level of bribery (see Model 2). Thus, our results suggest that overall managing resource dependence on the government via bribery to government officials is very costly to firms’ operation and hurts firms’ growth.

Finally, model (3) test whether there is a difference in the net benefit of bribery for small-medium size firms versus large firms. The coefficient on Bribe(p), the main effect for small-medium size firms, is negative and significant, indicating that bribery has a detrimental effect on the performance of small and medium size firms. In contrast, the positive and significant interaction effect between large firms and level of bribery (p<0.05) indicates large firms are not hurt as much as smaller firms, and may even potentially gain from bribery activities. In fact, the sub-sample analysis of large firms shows insignificant but positive effect of bribery on firm growth. Therefore, the results partially support H5c, in that bribery hurts performance only for small-medium size firms, while for large firms there is no evidence of a negative effect of bribery on firm growth, if not positive. This finding is robust to using alternative measures of institutions outside the sample (see details in robustness analysis in next section).

3.5.3 Robustness Analysis I: Using Different Estimation Methods

To check the robustness of the GLS results, HLM analysis using HLM6 software were also conducted. HLM produces more efficient estimation of parameters’ standard errors, by correcting heteroskedasticity and autocorrelation common in hierarchical data. According to Raundenbush and Bryk (2002), HLM estimates firm-level random
coefficients with Bayes estimates and country-level coefficients with Generalized Least Square and variance and covariance matrix with Maximum Likelihood Estimates. The results obtained from HLM are reported in Table 3.8, which are qualitatively similar to those in Table 3.6.

3.5.4 Robustness Analysis II: Focusing on Cross-Sample Sensitivity

Since both our dependent and independent variables come from the same WBES survey, our study had to confront the common method problem. In order to check the robustness of our empirical results, we retested our hypotheses by using data from the Global Competitiveness Report (GCR, 2000). GCR data are published by World Economic Forum, which compiled the data from its Executive Opinion Survey about national competitiveness, covering around 60 countries. Specifically, we compared alternative measures for our constructs of financial market, government regulation, policy uncertainty, and legal system with the equivalent items from the same-year GCR data such as “financial market sophistication,” “government regulation burden,” “institutional change,” and “judicial independence.” Given the availability of the objective financial market capitalization data, we also included it as another alternative measure of financial market development in the sensitivity analysis. Using these alternative measures, we obtained results which are qualitatively similar to those presented above except for the regulation effect. Government regulation significantly increases firms’ level of bribery in GCR data, while the effect is either insignificant or negative with World Bank data (see model 4 and 6 in Table 3.6).

4 The Hypotheses 5a-5c were not tested by HLM6, because the existing HLM6 software cannot estimate simultaneous equations.
The inconsistent result regarding to government regulations when using the World Bank and the GCR data may be due to the following possibilities: First, theoretically, the relationship between the degree of regulation and its effect on bribery may be ambiguous. On one hand, if government regulation serves to establish impersonal rules that restrain the power of government officials, then the higher degree of government regulation may reduce bribery. On the other hand, if government regulation serves to create more rent-seeking opportunities, then a higher degree of government regulation can increase bribery. For example, the U.S. and Russia may both have extensive regulations. However, the regulation in the U.S. tends to establish impersonal rules while regulation in Russia leans toward more discretion of government officials. Hence the effect of government regulation on bribery may be opposite in the U.S. and in Russia. Therefore, in the end, it is not the degree (or quantity) of regulation but the types (or quality) of regulation that matters. Second, methodologically, there may be more measurement error for the government regulation variable than for other institutional variables, since regulation is a very broad concept. For example, it may include regulation of business entry, competition, pricing, financial market, environments. Therefore, our measure in this study, constrained by our data, may not be inclusive enough to cover the broad scope of the concept of government regulation.
3.6 Discussion

3.6.1 Contributions and Implications

In our view, four theoretical contributions emerge. First, this study extends resource dependence theory, whose implication on managing dependence on the government remains relatively underexplored in the literature. This study sheds light on it by integrating resource dependence theory (Pfeffer & Salancik, 1978) and institution-based view (North, 1990; Peng, 2003) to explain how institutional contingencies affect firms’ dependence level on the government and consequently their strategic choices under high power imbalance. Second, this paper contributes to resource dependence theory by spelling out the cost side of managing resource dependence and directly testing the performance effect. Based on the results that managing the resource via bribing government officials actually hurts performance for small firms, but not for large firms, we suggest that a contingency approach may be more appropriate to understand the performance implications of managing resource dependence. Third, moving beyond single-country test in most previous studies, we apply resource dependence theory to broader institutional contexts and provide some empirical evidence about the generalizability of resource dependence theory across countries. Finally, this study also answers the call of North (2000) for a more fine-grained institutional analysis and contributes to the institution-based view by spelling out how institution matters, in what way and to what extent (Peng, 2003). Specifically, we identify four fine-grained dimensions of formal institutions that may shape bribery strategy, and develop theoretical arguments about how differences in each institutional dimension may predict cross-country variations in level of bribery.
Empirically, this study contributes to the political strategy literature by examining an important yet overlooked political strategy, bribery, on a worldwide basis. Our study enriches political strategy research by identifying and testing the contingencies and consequences of bribery. Specifically, we document that lower quality of formal institutions such as poor financial market development, high policy uncertainty and weak legal system is associated with higher level of bribery. After controlling for the endogeneity of firms’ level of bribery, we further report robust firm-level evidence that bribery hurts the growth of small firms, but not large ones. Finally, our large, cross-country firm-level sample test provides stronger and more generalizable empirical support for the proposition on the relationship between institutions and bribery, compared with relatively limited single-country studies or country-level analysis.

This study also has practical implications for both senior managers and policymakers in various countries. For senior managers, our cross-country analysis points out that the intensity of political investment can vary according to the particular institutional context in which their firms are embedded in. In addition, when make strategic choices to manage the resource dependence, the cost side of the strategy should be also taken into consideration, especially for small and medium size firms whose internal resources are much limited. For policymakers interested in promoting economic growth, it seems imperative to build effective market-supporting institutions to reduce firms’ costs of dealing with governments. These efforts can help firms grow and allow firms to devote more resources to market-based capabilities in the long run. And this is particularly helpful to facilitate the growth of small firms.
3.6.2 Limitations and Future Research Directions

Despite the merits, this article should be read with several limitations in mind. First, our conclusions are limited by the nature, availability, and quality of the data used. Due to the highly sensitive nature of the bribery question, it is likely that some respondents may tend to underreport the level of bribery, \(^5\) despite World Bank’s written assurance of the confidentiality of their responses. Second, as commonly seen in cross-country survey, there might be some scale interpretation differences across countries. Although this problem is almost inevitable in cross-country survey, an awareness of the potential bias is certainly important. Third, the data availability also prevents us from other interesting exploration. For example, it would be interesting to analyze the effects on alternative measures of firm growth other than sales growth. It is possible that the bribery effects may be different for different measures of firm performance. Furthermore, although we had a relatively large sample spanning 48 countries, missing data reduced the within-country samples, which limited our ability to do further within-country, sub-sample analysis to compare the results with other single-country studies (e.g. Peng & Luo, 2000 found small firms in China benefit from political connections). Given so much emphasis of the existing literature on China and India (Anand and Delios, 1996), we were disappointed that we had to drop these countries from our sample due to the large amount of missing data. Finally, our theoretical framework mainly focuses on formal institutions and their impacts on firms’ resource dependence on the government. Future research may also examine the impact of informal institutions such as cultures, norms, and values.

\(^5\) This may be more likely to be true for those firms in or from the U.S. and the U.K. where there are more strict anti-corruption regulations and laws. However, when we exclude those firms, our results remain the same.
which create the cognitive expectation and normative pressure in adopting bribery strategy (Husted, 1999).

3.6.3 Conclusion

This study extends resource dependence theory from managing inter-firm dependence to managing dependence on the government, a scenario that features huge power imbalance. We investigate the institutional determinants and growth consequences of firm bribery, an important yet overlooked political strategy in the literature. Utilizing a large firm-level cross-country dataset, we found that poor financial market, high policy uncertainty and weak legal system significantly increase firms’ level of bribery. More importantly, the results show that bribery has a significant negative effect on firm growth only for small firms, but not for large firms. Therefore, we suggest a contingency approach for future studies to further explore the performance implications of managing resource dependence.
### Table 3.1: Countries in the Sample

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of firms</th>
<th>%</th>
<th>Country</th>
<th>No. of firms</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>46</td>
<td>1.7%</td>
<td>Malaysia</td>
<td>57</td>
<td>2.1%</td>
</tr>
<tr>
<td>Argentina</td>
<td>48</td>
<td>1.8%</td>
<td>Mexico</td>
<td>57</td>
<td>2.1%</td>
</tr>
<tr>
<td>Armenia</td>
<td>50</td>
<td>1.9%</td>
<td>Nicaragua</td>
<td>63</td>
<td>2.3%</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>23</td>
<td>0.9%</td>
<td>Pakistan</td>
<td>62</td>
<td>2.3%</td>
</tr>
<tr>
<td>Bolivia</td>
<td>43</td>
<td>1.6%</td>
<td>Panama</td>
<td>57</td>
<td>2.1%</td>
</tr>
<tr>
<td>Brazil</td>
<td>23</td>
<td>0.9%</td>
<td>Peru</td>
<td>73</td>
<td>2.7%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>33</td>
<td>1.2%</td>
<td>Philippines</td>
<td>39</td>
<td>1.5%</td>
</tr>
<tr>
<td>Canada</td>
<td>71</td>
<td>2.6%</td>
<td>Poland</td>
<td>50</td>
<td>1.9%</td>
</tr>
<tr>
<td>Chile</td>
<td>56</td>
<td>2.1%</td>
<td>Portugal</td>
<td>53</td>
<td>2.0%</td>
</tr>
<tr>
<td>Colombia</td>
<td>185</td>
<td>6.9%</td>
<td>Romania</td>
<td>28</td>
<td>1.0%</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>32</td>
<td>1.2%</td>
<td>Russian Federation</td>
<td>54</td>
<td>2.0%</td>
</tr>
<tr>
<td>Croatia</td>
<td>29</td>
<td>1.1%</td>
<td>Singapore</td>
<td>70</td>
<td>2.6%</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>87</td>
<td>3.2%</td>
<td>Slovak Republic</td>
<td>69</td>
<td>2.6%</td>
</tr>
<tr>
<td>Ecuador</td>
<td>50</td>
<td>1.9%</td>
<td>Slovenia</td>
<td>49</td>
<td>1.8%</td>
</tr>
<tr>
<td>El Salvador</td>
<td>80</td>
<td>3.0%</td>
<td>Spain</td>
<td>40</td>
<td>1.5%</td>
</tr>
<tr>
<td>Estonia</td>
<td>60</td>
<td>2.2%</td>
<td>Sweden</td>
<td>36</td>
<td>1.3%</td>
</tr>
<tr>
<td>France</td>
<td>55</td>
<td>2.0%</td>
<td>Trinidad &amp; Tobago</td>
<td>58</td>
<td>2.2%</td>
</tr>
<tr>
<td>Georgia</td>
<td>68</td>
<td>2.5%</td>
<td>Turkey</td>
<td>44</td>
<td>1.6%</td>
</tr>
<tr>
<td>Germany</td>
<td>54</td>
<td>2.0%</td>
<td>Ukraine</td>
<td>47</td>
<td>1.7%</td>
</tr>
<tr>
<td>Guatemala</td>
<td>72</td>
<td>2.7%</td>
<td>United Kingdom</td>
<td>49</td>
<td>1.8%</td>
</tr>
<tr>
<td>Haiti</td>
<td>54</td>
<td>2.0%</td>
<td>United States</td>
<td>83</td>
<td>3.1%</td>
</tr>
<tr>
<td>Honduras</td>
<td>56</td>
<td>2.1%</td>
<td>Uruguay</td>
<td>49</td>
<td>1.8%</td>
</tr>
<tr>
<td>Hungary</td>
<td>65</td>
<td>2.4%</td>
<td>Uzbekistan</td>
<td>61</td>
<td>2.3%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>57</td>
<td>2.1%</td>
<td>Venezuela</td>
<td>41</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2686</strong></td>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>2686</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Table 3.2: Size, Ownership, and Industries

<table>
<thead>
<tr>
<th>Firm size</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firms</td>
<td>1115</td>
<td>1143</td>
<td>428</td>
<td>2686</td>
</tr>
<tr>
<td>Percentage</td>
<td>41%</td>
<td>43%</td>
<td>16%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm ownership</th>
<th>Private owned</th>
<th>Government owned</th>
<th>Foreign owned</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firms</td>
<td>2053</td>
<td>172</td>
<td>461</td>
<td>2686</td>
</tr>
<tr>
<td>Percentage</td>
<td>77%</td>
<td>6%</td>
<td>17%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>Manufacturing</th>
<th>Service</th>
<th>Agriculture</th>
<th>Construction</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of firms</td>
<td>903</td>
<td>1168</td>
<td>124</td>
<td>204</td>
<td>2686</td>
</tr>
<tr>
<td>Percentage</td>
<td>34%</td>
<td>43%</td>
<td>5%</td>
<td>8%</td>
<td>100%</td>
</tr>
</tbody>
</table>
## Table 3.3: Description of Variables

<table>
<thead>
<tr>
<th>Institutional variables</th>
<th>Measurement</th>
<th>Predicted /empirical sign on networking</th>
</tr>
</thead>
</table>
| Financial Market        | 1-4 scale: 1 no obstacle; 4 major obstacle  
Financial market = bank lack money to lend + lack long-term loans + lack access to foreign bank + lack access to non-bank equity | +/+                                    |
| Government Regulation   | 1-4 scale: 1 no obstacle; 4 major obstacle  
Government regulation = business registration regulation + customs regulation + labor regulation + foreign exchange regulation (Cronbach’s Alpha: 0.67) | +/?                                   |
| Policy Uncertainty      | 1-6 scale: 1 completely predictable; 6 completely unpredictable  
Policy uncertainty = law and regulatory policy + economic and financial policy (Cronbach’s Alpha: 0.87) | +/+                                   |
| Legal system            | 1-6 scale: 1 always; 6 never  
Legal system = enforceability of courts decisions + fairness and impartiality of courts + consistency of courts’ decisions (Cronbach’s Alpha: 0.74) | +/-                                   |

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Measurement</th>
<th>Predicted /empirical sign on firm growth</th>
</tr>
</thead>
</table>
| Level of bribery        | 1-7 scale: 1=0%; 2=up to 1%; 3=1-1.99%; 4=2-9.99%; 5=10-12%; 6=13-25%; 7=above 25%; 
Bribery = for firms like yours, % of sales in bribes to government and regulatory officials | + or -                                      |
| Firm growth             | Firms sales growth from 1997 to 1999                                        |                                         |

<table>
<thead>
<tr>
<th>Control variables</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm size</td>
<td>Small firms (employees 5-50); large firms (employees &gt; 500)</td>
</tr>
<tr>
<td>Firm age</td>
<td>Firm age = how many years since a firm’s original establishment</td>
</tr>
<tr>
<td>Industry sector</td>
<td>Industry sector: 1= manufacture; 2 = service; 3 = agriculture; 4 = construction; 5=others</td>
</tr>
<tr>
<td>Government Ownership</td>
<td>Government ownership: 1 = yes; 0 = no</td>
</tr>
<tr>
<td>Foreign Ownership</td>
<td>Foreign ownership: 1 = yes; 0 = no</td>
</tr>
<tr>
<td>GDP growth</td>
<td>GDP growth from 1997 to 1999</td>
</tr>
<tr>
<td>Question Items</td>
<td>Financial Market</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Non-bank equity</td>
<td>0.76</td>
</tr>
<tr>
<td>Long-term loan</td>
<td>0.68</td>
</tr>
<tr>
<td>Foreign bank</td>
<td>0.74</td>
</tr>
<tr>
<td>Bank lack money</td>
<td>0.57</td>
</tr>
<tr>
<td>Credit financing</td>
<td>0.61</td>
</tr>
<tr>
<td>Business licensing</td>
<td></td>
</tr>
<tr>
<td>Customs regulation</td>
<td></td>
</tr>
<tr>
<td>Labor regulation</td>
<td></td>
</tr>
<tr>
<td>Foreign exchange regulation</td>
<td></td>
</tr>
<tr>
<td>Economic policy uncertainty</td>
<td></td>
</tr>
<tr>
<td>Regulation &amp; law uncertainty</td>
<td></td>
</tr>
<tr>
<td>Courts enforceability</td>
<td></td>
</tr>
<tr>
<td>Courts fair &amp; impartial</td>
<td></td>
</tr>
<tr>
<td>Courts consistent</td>
<td></td>
</tr>
</tbody>
</table>

* Factor loadings less than 0.20 are omitted from the table for simplicity purpose.

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.86
Eigenvalues: 3.8, 2.0, 1.6, 1.2
Chi-square: 607.3 (p<0.001)

**Table 3.4: Factor Analysis for Theoretical Constructs**

70
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales growth</td>
<td>14.87</td>
<td>5.89</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bribery</td>
<td>2.32</td>
<td>1.42</td>
<td>-0.03</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Market</td>
<td>1.98</td>
<td>2.19</td>
<td>-0.08</td>
<td>0.30</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gov-regulation</td>
<td>8.51</td>
<td>1.41</td>
<td>-1.0</td>
<td>-0.07</td>
<td>0.52</td>
<td>1.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal system</td>
<td>11.46</td>
<td>1.87</td>
<td>-0.09</td>
<td>0.22</td>
<td>0.63</td>
<td>0.46</td>
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<tr>
<td>Policy- uncertain</td>
<td>7.63</td>
<td>0.98</td>
<td>-0.05</td>
<td>0.29</td>
<td>0.30</td>
<td>0.05</td>
<td>0.49</td>
<td>1.00</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Institution</td>
<td>38.59</td>
<td>5.04</td>
<td>-0.09</td>
<td>0.25</td>
<td>-0.88</td>
<td>0.69</td>
<td>0.87</td>
<td>0.52</td>
<td>1.00</td>
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<td>-0.02</td>
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<tr>
<td>Large firms</td>
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<td>0.37</td>
<td>-0.04</td>
<td>-0.16</td>
<td>0.02</td>
<td>0.13</td>
<td>0.03</td>
<td>-0.10</td>
<td>0.04</td>
<td>0.37</td>
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<td></td>
</tr>
<tr>
<td>Firm age</td>
<td>15.77</td>
<td>12.43</td>
<td>-1.1</td>
<td>-0.24</td>
<td>-1.12</td>
<td>0.20</td>
<td>-0.08</td>
<td>-0.23</td>
<td>-0.07</td>
<td>-0.28</td>
<td>0.23</td>
<td>1.00</td>
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<tr>
<td>Gov-owned</td>
<td>0.06</td>
<td>0.24</td>
<td>-0.01</td>
<td>-0.05</td>
<td>-0.02</td>
<td>-0.15</td>
<td>-0.08</td>
<td>-0.05</td>
<td>-0.07</td>
<td>-0.17</td>
<td>0.07</td>
<td>0.04</td>
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</tr>
<tr>
<td>Foreign-owned</td>
<td>0.17</td>
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<td>-0.04</td>
<td>-0.14</td>
<td>-0.04</td>
<td>0.07</td>
<td>-0.05</td>
<td>-0.10</td>
<td>-0.03</td>
<td>-0.21</td>
<td>0.23</td>
<td>0.07</td>
<td>0.01</td>
<td>1.00</td>
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(N=2686)  
*The underscored correlations are not statistically significant, and all others are significant at p<0.05.

Table 3.5: Descriptive Statistics and Correlation Matrix *
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<td>2.842***</td>
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<td>Small firms</td>
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<td>0.094*</td>
<td>0.085</td>
<td>0.087</td>
<td>0.091</td>
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<tr>
<td>Large firms</td>
<td>-0.270***</td>
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<td>-0.28***</td>
<td>-0.26***</td>
<td>-0.28***</td>
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<td>-0.200</td>
<td>-0.275**</td>
<td>-0.292**</td>
<td>-0.227</td>
<td>-0.287**</td>
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<td>Construction</td>
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<td>0.231**</td>
<td>0.166</td>
<td>0.167</td>
<td>0.205*</td>
<td>0.178</td>
<td>0.231**</td>
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<td>Institution (composite)</td>
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<td>(0.115)</td>
<td>0.116</td>
<td>(0.115)</td>
<td>0.116</td>
<td>(0.115)</td>
<td>(0.116)</td>
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<tr>
<td>Wald</td>
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<td>116.38</td>
<td>64.97</td>
<td>89.08</td>
<td>82.52</td>
<td>163.74</td>
<td>98.97</td>
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<td>0.04</td>
<td>0.13</td>
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<td>0.11</td>
<td>0.09</td>
<td>0.21</td>
<td>0.11</td>
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</table>

* Standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

**TABLE 3.6: GLS Random Effect Model of Level of bribery**
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<td>-0.485***</td>
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<td>(0.089)</td>
<td>(0.089)</td>
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<td>8.726***</td>
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<tr>
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<td>(3.997)</td>
<td>(3.992)</td>
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<td>Foreign-owned</td>
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<td>(3.523)</td>
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<td>0.160</td>
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<td>(0.780)</td>
<td>(0.717)</td>
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<td>Bribe (p)</td>
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<tr>
<td>Bribe (p) * large</td>
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<td>10.599**</td>
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<td></td>
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* Standard errors in parentheses

b Bribe (p) is the predicted level of bribery from the first stage equation in Table 3.6, model (6).

* significant at 10%; ** significant at 5%; *** significant at 1%

**TABLE 3.7: G2SLS Estimates on Sales Growth (H5a and H5c)**
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<td>(0.073)</td>
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<td>-0.135*</td>
<td>-0.135*</td>
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<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

*a Standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

**TABLE 3.8: Hierarchical Linear Model (HLM) of Level of bribery**
CHAPTER 4

INFORMATION ASYMMETRY IN INTERNATIONAL ACQUISITIONS: THE ROLE OF INFORMATION INSTITUTIONS

4.1 Introduction

International acquisition has become the primary foreign expansion strategy in recent years (Anand & Kogut, 1997; Anand & Delios, 2002). However, the challenges for making acquisitions successful are tremendous (Shimizu, Hitt, Vaidyanath & Pisano, 2004). Among these obstacles are the uncertainty of evaluating and integrating the target (Reuer & Koza, 2000).

Prior empirical studies focusing on information asymmetry in acquisitions have found that high information asymmetry may lead to the choices of joint ventures over full acquisitions in order to mitigate information risks (Chen & Hennart, 2004). And when information asymmetry is high, the market reacts more favorably to market entries of partial ownerships same as joint ventures (Balakrishnan & Koza, 1993). However, these studies have focused on the micro firm-level (e.g. the acquirer’s international experience) and transaction-level (e.g. related vs. unrelated acquisitions) factors that affect the level of information asymmetry in acquisitions and have paid little attention to the liability of operating under foreign institutions in a host country. Compared to domestic acquisitions, international acquisitions face a higher level of information asymmetry, due to national differences in informal and formal institutions (Rossi & Volpin, 2004).
The purpose of this study is to investigate the role of information institutions, defined as the rules governing corporate disclosure, in affecting the problem of information asymmetry in international acquisitions. We argue that the sources of information asymmetry may come not only from the firm-level or transaction-level, but also from the institution-level. The institutional rules have a fundamental impact on the information costs of market transactions (North, 1990; Peng, 2003). Specifically, we are interested in: 1) How do the host country’s information institutions affect the home country investors’ reactions to international acquisitions?; and 2) When information institutions are poor, what kind of private firm-level information mechanisms may help firms mitigate the information problem?

Focusing on the role of information institutions and its interaction with micro firm- and transaction-level attributes, we integrate the information asymmetry theory (Akerlof, 1970) with new institutional economics (North, 1990) and provide a comprehensive analysis of information problems in international acquisitions. By looking into the less-visible institutional roots of information asymmetry underpinning the more-visible market transactions, we highlight the institutional contingencies of foreign investment strategies.

This study also contributes to the acquisition literature about how institutions matter and to what extent. Most of the existing international acquisition literature has examined the effect of informal institutions of national culture (Morosini, Shane, & Singh, 1998) but yielded limited insights as to how formal institutions affect international strategies. This may account for the mixed findings on the effects of international acquisitions on shareholders’ wealth (Anand, Capron, & Mitchell, 2005). A fine-grained analysis of
formal institutions (Peng & Zhou, 2005), such as information institutions, may yield further insights as to why some international acquisitions outperform others.

4.2 Literature Review

4.2.1 The Importance of Information

Information institutions are vital to the production of information sufficient to support and facilitate exchanges in a capital/product market. A variety of information institutions, such as rules that regulate firms’ financial reporting, voluntary disclosures and financial analysts, serve the critical role of reducing the information asymmetry between managers and outsider investors. The credibility of the information is monitored and enforced by independent regulatory institutions, standard setters, internal versus external auditors, and other financial intermediaries (Healy & Palepu, 2001).

According to Healy & Palepu (2001), demand for information institutions supporting corporate disclosure arises from information asymmetry and agency problems between managers and outside investors. Managers typically have better information than outsider investors as to the true value of the business, as well as its future opportunities. The information asymmetry, combined with conflicting incentives between managers and investors, may deter potential investors and impede the efficient allocation of scarce resources in the economy.

International acquisitions face conceptually similar but practically more severe information problems (Rossi & Volpin, 2004). The differences in a country’s information institutions, such as accounting standards and financial disclosure rules, often make the valuation process for the target firm difficult and costly (Wittington, 2000). Recent corporate disclosure literature shows that formal institutions governing corporate
disclosure vary tremendously around the world in terms of the amount and frequency of disclosed corporate information, as well as its credibility (Bushman, Piotroski, & Smith, 2004). Consequently, the richness of information from firms’ financial reporting and disclosure also varies substantially in different countries (Collins and Kothari, 1989; Alford, Jones, Leftwich, & Zmijewski, 1993; Ball, Kothari, & Robin, 2000).

When the target operates under opaque disclosure rules, better-informed target managers not only have the incentive but also are able to misrepresent the value of the firm to sell it at a high price. On the other hand, the acquirer, as a cross-country outside investor, often has limited information and resources to verify the accuracy of the target’s financial reports and adjust the valuation accordingly. The information problem is particularly severe when the target firm is embedded in counties with poor information institutions where it is not uncommon to observe biased financial reporting, deficient disclosure and scarce analyst following (Ali & Huang, 2001; Collins & Kothari, 1989; Alford et al., 1993; Ball et al., 2000). Recently, increasing numbers of international acquisitions took place in emerging economies where high information asymmetry has been a major obstacle for international investors.

4.2.2 The Consequences of Information Asymmetry

The consequences of information asymmetry have been studied extensively across disciplines. In economics literature, Akerlof’s (1970) ‘market for lemons’ model demonstrates that high information asymmetry may lead to adverse selection and potential breakdown of otherwise Pareto-improving transactions. The auction model of incomplete information predicts ‘winner’s curse’, since the winner of a sealed-bid auction
of unknown common value tends to overestimate the true value of the auction object (Giliberto & Varaiya, 1989; Wilson, 1967).

The finance and accounting literature shows that high information asymmetry between managers and outsider investors decreases the effectiveness of investor protection and consequent corporate valuation (La Porta, et al., 2000, 2002). High information asymmetry also pushes investors to price-protect themselves by charging higher cost of capital. Investors demand a higher return to hold stocks with less public information to compensate for the non-diversifiable information risk—decision risks due to poor information (Easley & O’Hara, 2004). Merton (1987) shows that in equilibrium, the value of a firm is always lower when there is incomplete information. Barry and Brown (1984) similarly argue that securities with relatively less information have a higher information risk, which translates into a higher discount rate, resulting in a lower price.

Strategy research suggests that information asymmetry exacerbates the difficulty of evaluating the value of targets’ resources as well as the potential synergies (Barney, 1988). Under high information asymmetry, “if suitable contractual or institutional remedies for this information asymmetry problem are lacking, the acquirer bears a significant risk of failing to capture value from the deal, because of the risk of overpayment or from incurring excessive transaction costs during due diligence and negotiation processes.” (Reuer, et al. 2004: p19).

The strategy literature so far has mainly identified micro factors, such as transaction relatedness (Balakrishnan & Koza, 1993; Reuer & Koza, 2000) and prior experience (Chen & Hennart, 2004) and target ownerships (Capron & Shen, 2006) as the sources for
information asymmetry and proposed contractual remedies, such as choosing contingent pay-out or partial ownerships, to align the interest of the acquirer and the target (Reuer, et al. 2004). Borrowing insights from recent international finance and accounting literature on capital markets, we shift the focus from those firm- and transaction-level factors in international acquisitions to the institutional underpinnings affecting information asymmetry.

4.3 Hypotheses: Information Asymmetry in International Acquisitions

Little is known about how information institutions affect the acquirer’s gains in international acquisitions (Rossi & Volpin, 2004). Most existing studies focus mainly on the influence of cultural distance (Morosini, Shane, & Singh, 1998) and little on other serious challenges, such as the differences in accounting standards, financial disclosure, and legal institutions (Lee & Caves, 1998). These national differences create high uncertainty in evaluating and integrating the target firms (Reuer & Koza, 2000; Rossi & Volpin, 2004), and hence significantly increase the costs of conducting acquisitions abroad (Markides & Ittner, 1994; Datta & Puia, 1995). This is especially true for acquiring firms in emerging economies where the problem is exacerbated by weak information institutions (Peng, 2006).

We investigate the effect of information institutions on international acquisitions by borrowing insights from Akerlof’s (1970) information asymmetry theory and new institutional economics (North, 1990). New institutional economics argues that a country’s institutions - defined as rules of the game - have significant impact on the cost of market transactions in an economy. The information cost in searching and identifying
suitable exchange partners could be tremendous without the appropriate institutions in place facilitating the information flow of exchanges. Therefore when the information institutions supporting corporate disclosure are poor, the acquirers are likely to face high information asymmetry in selecting and evaluating the targets. The information asymmetry theory (Aklof, 1970) states that high information asymmetry often leads to adverse selections, where unattractive sellers are more likely to be on the market than attractive ones and buyers are likely to incur high risks of buying market lemons.

Although theoretically speaking, the acquirers anticipating potential adverse selection could discount the value of the target at the very beginning, in reality the targets are unlikely to accept the deals with the price below its true value unless there are liquidation constraints. Therefore, the left side of the distribution of valuation is truncated and acquisition deals with upward estimation bias are more likely to go forward. This upward estimation bias may be complicated by the agency problems (Berkovitch & Narayanan, 1993) and managerial hubris (Roll, 1986), which are not uncommon in acquisition market and are likely to be intensified by the high information asymmetry due to the poor information institutions of a target country. This is also consistent with auction theory which predicts the ‘winners’ curse’ when the bidder has poor information on the true value of the target (Giliberto & Varaiya, 1989; Wilson, 1967). All these negative effects of making acquisitions under high information asymmetry may lead the investors to price protect their investment and discount the value of the acquirers. Therefore, we hypothesize that:
**H1: The capital market reaction in the acquirer’s home country will be positively associated with the quality of the target nation’s information institutions in an international acquisition.**

While information asymmetry hurts the valuation of acquisition deals in general, the level of information asymmetry may vary with the type of acquisition. For example, Balakrishnan and Koza (1993) point out that unrelated alliances and acquisitions often face much higher information asymmetry than related alliances and acquisitions, due to parent firms’ unfamiliarity with new business lines. In addition, when making unrelated acquisitions, firms will have to rely more on public financial reports to understand and evaluate the target firm’s true value or synergy. Therefore, the market may react less negatively to the poor information institutions for related acquisitions than for unrelated ones.

**H2: The positive relation between the market reaction and the target nation’s information institutions will be weaker for a product-related acquisition than for an unrelated one.**

The liability of poor information institutions in an international acquisition is also likely to be more severe for firms at the initial stage of internationalization (Johanson & Vahlne, 1977). Firms with different levels of host country or international experience may have different capabilities to cope with information problems (Shaver, Mitchell, & Yeung, 1997). For example, the differences in accounting rules and reporting regulations have been a big barrier to firms assessing a target firm’s value, because foreign investors often don’t know how to make the accounting statements comparable to their own country’s standard (Wittington, 2000). However, firms with prior acquisition experience
in the host country may be more familiar with accounting statements in that country and
will therefore be more experienced in assessing the true value of the target firm. In a
word, there are reasons to believe that prior target nation acquisition experience may help
mitigate the information problems.

**H3:** The positive relationship between the market reaction and the target nation’s
information institutions will be weaker for experienced acquirers than for those without
prior acquisition experience in that country.

The literature has suggested that under high information asymmetry, as in the cases
of unrelated acquisitions or inexperienced acquirers, MNEs would choose international
joint ventures, rather than outright acquisitions (Agarwal, Anand & Croson, 2005), to
mitigate the risks of overpaying the target and incurring a high transaction cost
(Balakrishnan & Koza, 1993; Hennart & Reddy, 1997, 2000). By the same logic, when
acquiring targets in countries with poor information institutions and the information
asymmetry is high, choosing a partial acquisition may be more appropriate than choosing
a full acquisition, since a partial acquisition commits the firm to less investment and
reduces the downside loss. According to Chen and Hennart (2004), the ownership stake
of partial acquisitions gives the targets the incentives to refrain from information
misrepresentation or cheating, therefore enhancing the performance of partial acquisitions.
Consistent with this logic, Balakrishnan and Koza (1993) found that under high
information asymmetry, joint ventures perform better than full acquisitions. However,
this result was obtained without controlling for the endogeneity of the choice. In our
study, if firms endogenously choose partial acquisitions over full acquisitions based on
the quality of the host country’s information institutions, those firms may be more
effective in mitigating information problems, and perform better than those choosing full acquisitions. In sum,

**H4**: The acquirer’ propensity to choose a partial acquisition over a full acquisition will be negatively associated with the quality of the target nation’s information institutions.

**H5**: Firms choosing partial acquisitions will perform better than those choosing full acquisitions controlling the endogeneity of ownership choice based on the quality of the target nation’s information institutions.

4.4 Methodology

4.4.1 Sample

The original sample was composed of 4,170 international acquisitions by United States firms (parent) during 1995-1997, drawn from the Security Data Corporation (SDC) database. Stock returns data were pulled from CRSP data and other firm-level control variables were matched from CompuStat data. The data on country information institutions were drawn from the Center for Financial Analysis and Research (CIFAR). After merging these data sources, the final sample for hypothesis testing were composed of 1,575 international acquisitions with 1,309 full acquisitions (above 95% ownership) and 266 partial acquisitions (below 95% ownership) in 33 target nations (See Table 4.1 for target country distribution in the sample).
4.4.2 Measurements

**Dependent Variable:** We measured market reaction to an acquisition announcement using event study methodology. We first calculated the firm-specific forecast return by estimating a market model: 
\[ R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it}, \ t \in [-250, -50], \]
where \( R_{it} \) is firm i’s stock return on day \( t \), \( R_{mt} \) is the rate of return on a market portfolio of stocks on day \( t \), and \( \epsilon_{it} \) is the error term assumed to be normally distributed. The estimated forecast returns above were then used to calculate the risk-adjusted abnormal returns (i.e., \( AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \)) for trading days surrounding the announcement, as well as cumulative abnormal returns (CARs) over the (-1, 1) event window (i.e.,
\[ CAR_i = \sum_{t=-1}^{1} AR_{it}. \]
The three day window has been widely used in the literature to avoid the potential confounding factors associated with using a longer event window (Anand & Singh, 1997; Marsh, 1998; Reuer & Koza, 2000).

**Theoretical variables:** The measures of information institutions were adopted from Bushman et al. (2004) study, where they reported the cross-country variations in corporate transparency in the year of 1995. The country scores were internally constructed from “International Accounting and Auditing Trends in 1995”, compiled by the Center for Financial Analysis and Research (CIFAR). CIFAR examined the annual reports of about 1,000 industrial companies across various industries in 45 countries. To ensure the objectiveness of the comparison, CIFAR coded the inclusion or omission of over 90 items in these firms’ annual reports on information disclosure regarding general information, income statements, balance sheets, funds flow statements, accounting standards, stock data, and special items. These firm-level codes were then aggregated to
the country level, representing the quality of each country’s information institutions that support corporate transparency.

Those reported information items in Bushman et al. (2004), however, are not equally important to outside investors (Hope, 2005). For the purpose of this study, we only selected those that are most relevant to acquisition valuation. Theoretically speaking, the valuation of companies in any market is the sum of the current assets and the value of future prospects. Bruner et al. (2002) suggested that financial reporting and disclosure communicate the current value of a firm, and financial analysts provide information about their assessment of a firm’s future prospects. Therefore, we measure information institutions by the level of financial reporting and disclosure (labeled as Information hereafter) and the level of financial analyst activity (labeled as Analyst hereafter) in a country. Specifically, Information was a composite measure of the frequency of financial reporting, the count of disclosed items, and the consolidation of interim reports, while Analyst was measured by the number of analysts following the largest 30 companies in each country in 1996 (Chang, Khanna & Palepu, 2000). The level of financial reporting/disclosure and the level of financial analyst activity complement each other, and collectively provide information on the current value and future prospects of the firm.

Control variables: We controlled for several firm characteristics that may affect the market reaction to the acquisition announcements and, those characteristics that may be related to the explanatory variables (Lee & Caves, 1998; Markides & Ittner, 1994). Acquirers’ international acquisition experience may generate the knowledge and skills for international acquisitions and directly affect the market reaction to a new acquisition announcement (Haleblian & Finkelstein, 1999). We measure international acquisition
experience by the acquirer’s number of prior international acquisitions 10 years before the focal acquisitions, based on SDC data. The experience variable was transformed by the log of 1 plus the number of experience to correct the skewness of the experience variable. In addition to the international acquisition experience, other international experience may also help focal firms to get familiar with foreign countries’ institutional environment and overcome the liability of foreignness. To account for other types of international exposure a firm might have, we controlled for the level of the internationalization, measured by the ratio of foreign sales to total sales (Sullivan, 1994; Lu & Beamish, 2004). Beyond the general level of internationalization and international acquisition experience, we also constructed a more specific measure for the host country’s acquisition experience. Prior target nation acquisition experience may help tremendously in interpreting the local financial and accounting reporting, as well as legal and cultural issues related to acquisitions in that particular country. Host country acquisition experience was coded as a dummy variable with one indicating that the acquirer has prior acquisition experience in the target nation.

Acquirer firm size may affect firms’ international experience and performance and was measured by the logarithm of the acquirer’s total assets at the end of the year prior to focal acquisition (Vermeulen & Barkema, 2001). Prior performance, measured by the acquirer’ return on assets (ROA) at the end of the year before the focal acquisition, was also controlled, since past profitability may influence future performance (Lee & Caves; 1998; Markids & Ittner, 1994). Acquisition relatedness was found to be highly correlated with acquisition performance; the market reacts more positively for related acquisitions (Singh & Montgomery, 1987). We measured relatedness according to the similarity of
SIC code of the acquirer and the target (Haleblian & Finkelstain, 1999). Specifically, if the acquirer and the target share the same 4-digit SIC code, then relatedness is coded as 1 and 0 otherwise. Finally, to control for potential heterogeneity of information sensitivity across different industries, we generated an industry dummy variable, with service industry as 1 and any other industry as 0 (Reuer, et al. 2004).

To better test the effects of information institutions, we also controlled for other potentially confounding institutional factors in a host country. These institutional factors are host country growth, measured by the host country’s GDP growth in the past 5 years, the level of political stability and the quality of the rule of law published in the World Bank Report 1996. Finally, culture distance has been widely used to control for the cultural liability in international expansion, often measured by Kogut and Singh’s (1988) index for weighting and summing: $\text{CD}_{(j,k)} = \text{sum}\{(I_{ij} - I_{ik})^2 / V_i\}/4$, where $\text{CD}_{(j,k)}$ is the cultural distance between country j (in this case the US) and k (target nation), and $V_i$ is the variance of the index of the $i$th dimension of culture distance.

4.4.3 Method

Our estimation methods were chosen based on the following econometric issues. First, the data analysis based on the full acquisition sample may encounter sample selection bias because it precludes those partial acquisitions without controlling for the choice effect (Shaver, 1998; Heckman, 1979). If there are some latent variables that correlate to both the choice and the performance of full acquisitions, then the estimation will be biased. We therefore controlled for the sample selection bias using Heckman’s (1979) two-stage model and obtained similar results as are presented in GLS random
effect model in Table 4.3. Second, when testing the performance difference between partial and full acquisitions, there is the endogenous variable problem of ownership choice. We therefore controlled for the endogeneity of the choice between partial and full acquisitions using a treatment effect model (Greene, 2003:787-789), a model similar to Heckman’s two-stage model that controls for selection bias.

Third, firms within the same countries are embedded in the same institutional environment. This makes the assumption of independence across observations questionable. Either the country fixed effects or random effects model may be appropriate to deal with this type of error structure. However, the country fixed effects model simply absorbs the effects of all time-invariant country variables into the country dummy variable and wipes out the effect of other country-level variables (Kennedy, 2003). The country random effects model, on the other hand, does allow the model to contain other country-level variables. Therefore, given our main theoretical interest in country-level institutional variables, the GLS country random effect model is more appropriate for this study.

The drawback of using random effects model is that the estimation may not be consistent, since it depends on the critical assumption that the random country effects (as part of the residual) are uncorrelated with the independent variables (Greene, 2003). To solve this issue, we controlled for as many institutional variables as possible, such as economic growth, political stability, rule of law, and culture distance. To further ensure the robustness of our analysis, we also analyzed the data with Hierarchical Linear Modeling (HLM), an established software for nested hierarchical structure data, and found similar results.
4.5 Findings

Table 4.2 presents the descriptive statistics and the correlation table, from which we can see that the average market reaction to an international acquisition deal is modestly positive (mean=0.56%), but there is a large variance among different deals (std =0.06). The acquirer’s size and international acquisition experience are significantly associated with the market reactions to acquisition announcements (p<0.05). The level of internationalization is positively correlated with international acquisition experience and host country acquisition experience. And at the country-level, country economic growth, political stability, rule of law and information institutions are all significantly correlated (p<0.05).

Table 4.3 reports the empirical results testing hypotheses 1-3. Model I is the benchmark model, from which we could see that acquirers’ prior performance and the level of internationalization have a marginally positive effect on the market reaction to international acquisitions. Related acquisitions, on average, receive positive market reactions, although the coefficient is not statistically significant. Model II tests Hypothesis 1, which claims that the market reacts positively to the quality of information institutions of an international acquisition. Model II shows that information institutions measured by both information intermediaries (Analyst, p<0.10) and financial reporting and disclosure (Information, p<0.05) have a positive effect on acquirers’ cumulative abnormal returns (CARs). Therefore, Hypothesis 1 is supported by the data.

Hypothesis 2 states that the positive relation between market reaction and host country’s information institutions will be weaker for related international acquisitions than for unrelated ones. Model III demonstrates the significantly negative interaction
between financial information and acquisition relatedness (p<0.01) and therefore supports Hypothesis 2. Finally, Hypothesis 3 suggests that the positive relation between market reaction and host country’ information institution will be weaker for acquirers with prior host country experience than for inexperienced acquirers. Model IV specifically tests the interaction between these factors, and finds that the interaction between host country acquisition experience and financial information is significantly negative (p<0.01). It indicates that the quality of information institutions matters less for experienced acquirers than for inexperienced ones; therefore Hypotheses 3 is also supported.

Table 4.4 tests Hypothesis 4, which relates to the choice between partial versus full acquisitions, contingent upon firm-level and host country-level factors. Model I is the control model from which we could see that firms undertaking related acquisitions and firms with good prior performance are less likely to choose partial acquisitions (p<0.05). The higher the culture distance, the higher the acquirers’ propensity to choose a partial acquisition (p<0.01). Model II tests the effect of information institutions on this choice, and the results show that the quality of financial information is negatively associated with choosing partial acquisitions (p<0.01), while the effects of analysts’ following is not significant. In addition, the model shows that a high quality of rule of law also significantly decreases the chance of choosing partial ownerships.

Table 4.5 tests Hypothesis 5, which states that partial acquisitions chosen to overcome the information problems under poor information institutions outperform full acquisitions. Model I is the control model without controlling for the endogeneity of the choice between partial and full acquisitions, where we found only marginally positive market reactions to partial acquisitions. After controlling for the endogenous choice of
partial acquisitions, Model II clearly shows that partial acquisitions receive more favorable market reactions over full acquisitions (p<0.01). The inverse Mills ratio (p<0.01) indicates that a selectivity bias exists for partial acquisitions. Taken together, all of this information supports Hypothesis 5.

4.6 Discussion

4.6.1 Contribution and Implications

Three contributions emerge from this study. First, it extends the information asymmetry theory (Akerlof, 1970) from the micro firm-level and transaction-level attributes to the macro institutional contexts across countries. It examines how the host country’s information institutions governing financial reporting and disclosure may reduce or exacerbate the information problem and affect acquirers’ wealth in the global takeover market. Second, it contributes the institution-based view of business strategy (North, 1990, Peng, 2003), which describes how institutions matter and to what extent. Prior studies have mostly focused on informal institutions, such as national culture, and little is known about the role of formal institutions, such as information institutions, in international acquisitions. This study provides empirical evidence that information institutions do matter significantly and the effect differs for different types of acquisitions. Finally, it furthers the understanding of the performance of international acquisition across countries, where mixed empirical results were found in the literature. Some find significantly positive or non-negative effects on shareholders’ wealth (Markides & Ittner, 1994; Morck & Yeung, 1992), while others document significantly negative stock market reactions (Datta & Puia, 1995; Lee & Caves, 1998). Our fine-grained analysis of the
host country’s institutions (Peng & Zhou, 2005), such as information institutions, may help to further tackle the performance heterogeneity of international acquisitions.

Given the significant growth of international acquisitions in both developed and emerging economies in the past decade, the empirical implications for this study could be multi-faceted: first, it cautions managers as to the risks of dealing with information problems in acquiring targets in low-quality information environments, the difficulties of evaluating the true potential of the target firm and acquisition synergy, and the potential negative reactions from the market. Second, when the information asymmetry is quite high due to the poor information institutions in the host country, choosing a related acquisition instead of an unrelated acquisition, or choosing partial acquisitions instead of full acquisitions, may mitigate the adverse effect of information asymmetry. In addition, prior host country acquisition experience may also help mitigate the information problem rooted in poor information institutions. Finally, for policy makers, our results do suggest that investors significantly discount acquisitions that take place in a low-quality information environment. Therefore, to enhance the valuation of the firms in the global capital market, countries should strive for a more transparent information environment with market-supporting information institutions.

4.6.2 Limitations and Future Directions

Along with the merits described above, this study also has several limitations: First, the measurement of information institutions may not be the most comprehensive one due to data limitations. Information institutions may include aspects such as the credibility of financial reporting and the enforcement of accounting rules, and the level of information
dissemination. Future studies may construct a better measure of information institutions. Second, due to the large amount of missing values regarding the market reaction to the target firm, we were unable to assess the information asymmetry effect on the pricing of the target firms located in low-quality information environments. It would be of interest to investigate how low information institutions affect the combined value creation of international acquisitions as well as the partitioning of synergy values between the acquirer and the target. Future studies may look into these interesting questions if more data is available on the target side. Finally, given that public information institutions change very slowly despite the large demand of the global capital market, more work is needed to further explore whether other information mechanisms exist to deal with information asymmetry resulting from poor information institutions. Such mechanisms may include cross-listing, sequential entry mode choices, contingency payout, and due diligence by hiring consulting firms.

4.6.3 Conclusion

This study investigates the information asymmetry problem in international acquisitions resulting from poor information institutions in the host country. We found that the market discounts the value of the acquiring firm when the host country’s information institutions are weak and the information asymmetry is high. In addition, the adverse effect of poor information hurts unrelated acquisitions more than related ones and hurts inexperienced acquirers more than those with prior host country experience. To reduce the information asymmetry, choosing a partial acquisition instead of a full acquisition may help mitigate the information asymmetry problem and generate more
positive returns. Overall, this study contributes to the literature by shedding light on how information institutions affect the level of information asymmetry in the international takeover market, and what mechanisms may exist to remedy the problem.
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Table 4.1 Country distribution in the sample
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<td>0.50</td>
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<tr>
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<td>0.33</td>
<td>0.47</td>
<td>0.02</td>
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<td>0.03</td>
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<td>0.16</td>
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<td>8.Service industry</td>
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<td>0.48</td>
<td>0.03</td>
<td>-0.16</td>
<td>-0.04</td>
<td>-0.11</td>
<td>-0.08</td>
<td>-0.13</td>
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<td>1.00</td>
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<td>9.Information institutions</td>
<td>81.69</td>
<td>15.97</td>
<td>0.01</td>
<td>0.05</td>
<td>-0.09</td>
<td>-0.04</td>
<td>-0.12</td>
<td>-0.04</td>
<td>0.01</td>
<td>0.02</td>
<td>1.00</td>
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<td>10.Financial analysts</td>
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<td>0.10</td>
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<td>0.00</td>
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<td>11.Host country growth</td>
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<td>0.02</td>
<td>0.02</td>
<td>-0.04</td>
<td>0.11</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
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<td>12.Culture distance</td>
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<td>1.08</td>
<td>0.01</td>
<td>-0.08</td>
<td>0.16</td>
<td>0.07</td>
<td>0.09</td>
<td>0.03</td>
<td>0.02</td>
<td>0.00</td>
<td>-0.40</td>
<td>-0.24</td>
<td>0.53</td>
<td>1.00</td>
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<tr>
<td>13.Political stability</td>
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<td>0.62</td>
<td>0.01</td>
<td>0.03</td>
<td>-0.14</td>
<td>-0.03</td>
<td>-0.07</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.27</td>
<td>0.42</td>
<td>-0.40</td>
<td>-0.37</td>
<td>1.00</td>
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<tr>
<td>14. Rule of Law</td>
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<td>0.78</td>
<td>0.00</td>
<td>0.05</td>
<td>-0.21</td>
<td>-0.05</td>
<td>-0.07</td>
<td>-0.04</td>
<td>0.02</td>
<td>0.03</td>
<td>0.24</td>
<td>0.36</td>
<td>-0.44</td>
<td>-0.62</td>
<td>0.83</td>
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(n =1575. Underscored correlations significant at p<0.05)

Table 4.2 Descriptive Statistics and Correlation Matrix
<table>
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<tr>
<th>Theoretical variable</th>
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<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial analyst</td>
<td>.005†</td>
<td>.005†</td>
<td>.005†</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>.0004*</td>
<td>.0008**</td>
<td>.0005**</td>
<td></td>
</tr>
<tr>
<td>(Information × Relatedness)</td>
<td></td>
<td></td>
<td>.0006*</td>
<td></td>
</tr>
<tr>
<td>(Information × Host country exp)</td>
<td></td>
<td></td>
<td></td>
<td>.0017**</td>
</tr>
<tr>
<td>Overall R²</td>
<td>.021</td>
<td>.027</td>
<td>.031</td>
<td>.037</td>
</tr>
<tr>
<td>Wald Statistics</td>
<td>22*</td>
<td>28**</td>
<td>32**</td>
<td>38***</td>
</tr>
</tbody>
</table>

| Constant             | .0142  | - .0336| -.0681* | -.0441*|
|                      | (.0088) | (.0221)| (.0281) | (.0222)|

**Firm level control**

| Firm size            | - .0010| - .0010| - .0010| - .0012|
|                      | (.0009) | (.0009)| (.0009) | (.0009)|
| Prior performance    | .0286†  | .0286†  | .0278†  | .0279†  |
|                      | (.0167) | (.0169) | (.0168) | (.0168)|
| Relatedness          | .0010   | .0002   | .0520†  | .0008   |
|                      | (.0037) | (.0037) | (.0266) | (.0037)|
| Int’l acquisition exp| - .0029 | - .0027| - .0026| - .0022|
|                      | (.0019) | (.0019) | (.0019) | (.0019)|
| Internationalization | .0141†  | .0153†  | .0157** | .0151†  |
|                      | (.0079) | (.0079) | (.0079) | (.0079)|
| Host country acq exp | - .0057 | - .0060| - .0053 | 1.435** |
|                      | (.0061) | (.0061) | (.0061) | (.0475)|
| Service industry     | - .0065‡ | - .0059| - .0057 | - .0068† |
|                      | (.0038) | (.0039) | (.0038) | (.0038)|

**Country level control**

| Host country growth  | - .2186† | - .1309 | - .1377 | - .1072 |
|                      | (.1318) | (.1365) | (.1363) | (.1361)|
| Culture distance     | - .0001  | - .0023  | - .0024  | - .0021 |
|                      | (.0024) | (.0026) | (.0025) | (.0025)|
| Political stability  | - .0005  | - .0042  | - .0039  | - .0056 |
|                      | (.0058) | (.0060) | (.0060) | (.0060)|
| Rule of law          | .0000    | .0029    | .0028    | .0037  |
|                      | (.0051) | (.0052) | (.0052) | (.0052)|

| W         | 22*    | 28**   | 32**    | 38***   |

*a Country random effects model.  b N=1309. (S.E. in parentheses). † significant at 10%; * significant at 5%; ** significant at 1%

**Table 4.3 Market Reaction to Full Acquisitions: Hypotheses 1-3**
<table>
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<tr>
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<th>II</th>
</tr>
</thead>
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<td>-.3256</td>
</tr>
<tr>
<td></td>
<td>(.1625)(^b)</td>
<td>(.4365)</td>
</tr>
<tr>
<td><strong>Firm level control</strong></td>
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<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>.0856**</td>
<td>.0847**</td>
</tr>
<tr>
<td></td>
<td>(.0188)</td>
<td>(.0010)</td>
</tr>
<tr>
<td>Prior performance</td>
<td>-1.6657**</td>
<td>-1.5808**</td>
</tr>
<tr>
<td></td>
<td>(.3702)</td>
<td>(.3753)</td>
</tr>
<tr>
<td>Relatedness</td>
<td>-.1684*</td>
<td>-.1611*</td>
</tr>
<tr>
<td></td>
<td>(.0729)</td>
<td>(.0039)</td>
</tr>
<tr>
<td>Int’l acquisition exp</td>
<td>-.0352</td>
<td>-.0038**</td>
</tr>
<tr>
<td></td>
<td>(.0442)</td>
<td>(.0444)</td>
</tr>
<tr>
<td>Host country acq exp</td>
<td>-.1133</td>
<td>-.1364</td>
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<tr>
<td></td>
<td>(.1638)</td>
<td>(.0115)</td>
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<tr>
<td>Service industry</td>
<td>-.0771</td>
<td>-.0597</td>
</tr>
<tr>
<td></td>
<td>(.1232)</td>
<td>(.0041)</td>
</tr>
<tr>
<td><strong>Country level control</strong></td>
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<tr>
<td>Host country growth</td>
<td>4.0110</td>
<td>2.3540</td>
</tr>
<tr>
<td></td>
<td>(3.8008)</td>
<td>(2.8373)</td>
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<td>Culture distance</td>
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<td>.1205*</td>
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<tr>
<td></td>
<td>(.0657)</td>
<td>(.0477)</td>
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<tr>
<td>Political stability</td>
<td>-.1132</td>
<td>-.0568</td>
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<tr>
<td></td>
<td>(.1155)</td>
<td>(.0985)</td>
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<tr>
<td>Rule of law</td>
<td>-.1319</td>
<td>-.2410**</td>
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<tr>
<td></td>
<td>(.0876)</td>
<td>(.0819)</td>
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<tr>
<td><strong>Theoretical variable</strong></td>
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<td>Information</td>
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<td></td>
<td>(.0034)</td>
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</tr>
<tr>
<td>Pseudo R(^2)</td>
<td>.089</td>
<td>.103</td>
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<td>173**</td>
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<tr>
<td>Observations</td>
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<td>1575</td>
</tr>
</tbody>
</table>

\(^a\) Probit model of the binary choice

\(^b\)(S.E. in parentheses). † significant at 10%; * significant at 5%; ** significant at 1%

**Table 4.4 The Choice of Partial Acquisitions over Full Acquisitions**
<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.0202**</td>
<td>.0017†</td>
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<tr>
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<td>(.0061)</td>
<td>(.0009)</td>
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<tr>
<td>Firm size</td>
<td>.0205</td>
<td>.0252</td>
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<tr>
<td></td>
<td>(.0156)</td>
<td>(.0159)</td>
</tr>
<tr>
<td>Prior performance</td>
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<td>-.0190</td>
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<tr>
<td></td>
<td>(.0169)</td>
<td>(.0174)</td>
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<tr>
<td>Relatedness</td>
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<td></td>
<td>(.0038)</td>
<td>(.0039)</td>
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<tr>
<td>Int'l acquisition exp</td>
<td>-.0039*</td>
<td>-.0037*</td>
</tr>
<tr>
<td></td>
<td>(.0019)</td>
<td>(.0019)</td>
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<tr>
<td>Host country acq exp</td>
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<td>-.0078</td>
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<tr>
<td></td>
<td>(.0067)</td>
<td>(.0068)</td>
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<td>Service industry</td>
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<td>-.0097*</td>
</tr>
<tr>
<td></td>
<td>(.0039)</td>
<td>(.0040)</td>
</tr>
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<td>Partial acquisitions</td>
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<td>.0288**</td>
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<td>(.0105)</td>
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<td>Inverse of Mills Ratio</td>
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<tr>
<td>Observations</td>
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<td>1575</td>
</tr>
</tbody>
</table>

*a Market reaction to international acquisitions, controlling the endogeneity of the choice between full and partial acquisitions as specified in model 2, Table 4.4.

b(S.E. in parentheses). † significant at 10%; * significant at 5%; ** significant at 1%

**Table 4.5 Market Reaction to Partial Acquisitions**
CHAPTER 5

CONCLUSIONS

The central research question of this dissertation is: How do institutions affect firms’ strategic choices and performance? This study answers this question by integrating theoretical insights from new institutional economics (North, 1990), the resource dependence theory (Pfeffer & Salancik, 1978) and the information asymmetry theory (Akerlof, 1970) and applying them on firms’ transaction strategies, bribery strategies and international acquisition strategies. Overall, the results demonstrate that different dimensions of institutions do exert a significant impact on various business strategies and consequent performance.

Essay One develops an analytical model of the dynamics the strategic choices that firms make in response to market-oriented transitions. The model predicts that the optimal timing (point of inflection) for firms to switch from relational exchanges to arm’s-length transactions vary significantly across countries, and is contingent on the development level of a country’s legal, competition and information institutions.

Essay Two is an empirical study of the institutional contingencies of firms’ bribery strategy to government officials across countries. The results provide empirical evidence that the level of firms’ bribery is contingent on the quality of a country’s financial, political, and legal institutions. After controlling the endogeneity of bribery choice, bribery hurts small firms’ growth, but not that of large firms.
Essay Three is an empirical study of how firms’ international acquisitions are affected by the target nation’s information institutions supporting corporate transparency. Our empirical results indicate that market reacts negatively to institution-based information asymmetry in international acquisitions. This negative reaction is more significant for inexperienced acquirers and firms making unrelated acquisitions. In addition, when information institutions are poor, firms choosing partial acquisitions perform better than those choosing full acquisitions.

Overall this dissertation suggests that the quality of market-supporting institutions, such as political decentralization and legal efficiency, and the quality of information institutions, significantly reduce the cost of doing business (e.g. transaction cost, cost of dealing with political rent-seeking, information cost in international acquisitions) and facilitate firm growth. This study therefore moves beyond the simple argument that institutions matter and seeks to understand how institutions matter, to what extent, in what ways.

The theoretical contributions and practical implications from this study could be summarized as follows. Theoretically, this study contribute to an institution-based view of business strategies by identifying the institutional contingencies of business strategies as well as the interaction between macro and micro factors in determining firms’ strategic choices. The practical implications of this study are two-fold: it demonstrates the necessity for managers to adjust their strategies according to different institutional environments and the importance for policy makers to establish efficient market-supporting institutions that help reduce the cost of doing business and facilitates firm growth.


Provan, K., Beyer, J., & Kruytbosch, C. 1980. Environmental linkages and power in resource


