

A “Lemon” or a “Bargain”? The Impact of Information Institutions on Acquirer Returns in International Acquisitions*

Jessie Qi Zhou
Cox School of Business
Southern Methodist University
Email: qzhou@cox.smu.edu

Jaideep Anand
Fisher College of Business
The Ohio State University
Email: anand.18@osu.edu

*Preliminary draft for comments: Please do not cite or quote without permission. An earlier version of this paper was presented at the Academy of Management meetings, where it was selected for publication in the *Best Paper Proceedings*.

A “Lemon” or a “Bargain”? The Impact of Information Institutions on Acquirer Returns in International Acquisitions

Abstract

This study examines the effect of information institutions on international acquisition performance. Existing literature reveals competing perspectives in predicting acquirer returns when targets reside in countries with a poor information environment, predicting both “lemon” and “bargain” effects. To tackle this theoretical controversy, we study U.S. firms acquiring targets in countries with varying degrees of corporate transparency. Our results suggest that for single-bid acquisitions, higher information opacity in the target country offers more bargain opportunities, especially for related business. However, under bidding wars, information asymmetry may lead to a more severe “lemon” problem. Finally, partial acquisitions may help reduce information asymmetry.

Key words: information asymmetry, international acquisitions, formal institutions.

International acquisitions often involve the risky purchase of assets in unfamiliar environments and can be accompanied by significant information asymmetry between the acquirer and target firms (Reuer & Koza, 2000). High information asymmetry makes the valuation of the foreign target a challenging task (Capron & Shen, 2007). However, the effect of such information asymmetry on international acquisitions and acquirer performance is not well understood.

The literatures on information economics and auction theory provide two competing theoretical perspectives (Akerlof, 1970; Kagel & Levin, 1986; Koeplin, Sarin, & Shapiro, 2000). One perspective indicates that when information about a target is scarce, the target will have both the motivation and the capability to manipulate information to sell itself at the highest price, which increases the risk of buying a “lemon” from the acquirer perspective (Akerlof, 1970). In contrast, the other perspective argues that when information about the target is poor, the target will have less tradability. Facing limited competition for the target, the acquirer could impose a deep price discount¹ in purchasing the target and actually get a relative “bargain” (Koeplin et al., 2000). Our study attempts to resolve this tension between these perspectives.

A significant component of such information asymmetry between the acquirer and target firms arises due to large variations across the world in financial reporting and corporate disclosure (Wittington, 2000, Shimizu, Hitt, Vaidyanath & Pisano, 2004). Information institutions which provide the rules governing financial reporting and corporate disclosure, play a critical role in regulating information production and dissemination, and consequently reduce

¹ Consistent with the private company discount literature (e.g., Capron & Shen, 2007; Koeplin., Sarin & Shapiro, 2000), here “discount” means paying lower premium than the premium would be if the target has more transparent information. “Discount” does not mean paying lower price than the true value of the target, since the target is likely to reject the bid if it is below its current market price.

information asymmetry and facilitate transactions in the global financial market (Healy & Palepu, 2001). Our study explicitly takes into account the variance in these information institutions around the world.

Beyond resolving the theoretical tension, it is also important to understand international acquisitions because they have become the primary foreign expansion strategy in recent years. The total value of international acquisitions exceeded 1.6 trillion dollars in 2007 with U.S. firms accounting for about one-fourth of it (UNCTAD, 2008). In all the major western industrialized countries with the exception of the US, the value of cross-border transactions now exceeds that of the domestic transactions. Further, with the rapid speed of globalization, the value of international acquisitions has been growing not only in developed countries but also in emerging markets. The total dollar amount of cross-board M&A in developing countries reached 179 billion in 2007, almost 10 times the amount in 1990. The issue of information asymmetry can be particularly salient for acquisitions made in many emerging economies that are financially opaque.

Despite its theoretical and practical relevance, research on the important link between information asymmetry and international acquisitions has rarely been undertaken. Extant research focuses mainly on how informal institutions such as national culture (Morosini, Shane, & Singh, 1998) affect the performance of international acquisitions. Thus, little is known about how the target country's formal institutions such as information institutions affect shareholder wealth in international acquisitions. According to institutional theory (North, 1990), both formal and informal institutions define "the rule of the game" and therefore shape firms' strategic choices and subsequent performance. Neglecting the role of formal institutions may partially explain the mixed results on the effects of international acquisitions on shareholders' wealth as

well as the determinants of value creation (Anand, Capron, & Mitchell, 2005; King et al. 2004; Shimizu, Hitt, Vaidyanath & Pisano, 2004). This study attempts to fill this gap by examining how information institutions affect acquirers' returns in international acquisitions.

Integrating information economics and strategy theory, we propose a contingency framework in which the dominance of the “bargain” effect or the “lemon” effect of information asymmetry depends on the number of bidders: in single-bid acquisitions, the positive “bargain” effect resulting from reduced competition under information asymmetry dominant; in multiple-bid acquisitions, the negative “lemon” effect of information asymmetry dominant due to fierce bidding contests and consequent winner's curse. We then test our hypotheses on a sample of international acquisitions conducted by U.S. firms from 1990 to 2007 in 36 countries with varying degree of corporate transparency.

Consistent with our argument, we find evidence of the “lemon” effect in multiple-bid acquisitions and the “bargain” effect in single-bid acquisitions when targets are embedded information opaque countries. In addition, we find that the “bargain” effect only holds for acquisitions in similar business and that partial acquisitions can be a viable method to deal with information asymmetry. Overall, by analyzing the institutional roots of the information asymmetry underpinning the market transactions, this study also answers the call for a better understanding of how institutions matter – to what extent and in which ways – in the context of international acquisitions (Shimizu, et al 2004).

BACKGROUND AND HYPOTHESES DEVELOPMENT

The Performance of International Acquisitions

Whether cross-border acquisitions create or destroy shareholder wealth is still a controversial question due to the mixed empirical evidence found so far (Anand, Capron, & Mitchell, 2005). Some find international acquisitions have significantly positive effects on shareholders' wealth (Markides & Ittner, 1994; Morck & Yeung, 1992), while others document an insignificant (Datta & Puia, 1995) or even negative (Lee & Caves, 1998) impact on acquirer performance. One explanation for the mixed results is that international acquisitions involve buying and integrating targets in countries with different economic, legal and social systems and that these institutional factors could play important roles in determining acquisition performance (Shimuzi et al., 2004). While existing studies have considered the role of informal institutions such as national culture (Morosini, Shane, & Singh, 1998), limited research has examined how formal institutions affect international acquisitions (Rossi & Volpin, 2004). In a review of the existing research on international acquisitions, Shimizu et al (2004) suggests that "...more research on the different outcomes of M&As into countries with differing institutional environments would be highly valuable." 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.

The Importance of Information Institutions

The information institutions which govern financial transparency and disclosure play a critical role in reducing the information asymmetry between managers and outside investors and facilitating transactions in a capital market. The differences in information institutions between

the acquirer country and the target country, 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 transparency 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 have both the incentive and the ability to misrepresent the value of the firm. In addition, it is often costly for the foreign acquirer to obtain relevant information to verify the accuracy of the target's financial reports. The information problem is particularly severe in countries with poor information institutions where biased and deficient financial reporting is common and the analyst following is scarce (Ali & Huang, 2001; Collins & Kothari, 1989; Alford et al., 1993; Ball et al., 2000). Recently, with increasing numbers of international acquisitions taking place in emerging economies, high information asymmetry has become a major obstacle (Peng, 2006).

The Consequences of Information Asymmetry

The information asymmetry theory (Akerlof, 1970) states that in a product market if a seller has more information about the quality of goods and the buyer face high uncertainty in verifying the product quality, the buyer will rationally discount the price to protect from overpayment in case of buying a "lemon". In response, the seller may find it feasible and profitable to signal product value credibly. If not, the seller could reject the price and exit the market or accept the

low price and behave opportunistically by offer lower quality products. The latter is a classic example of “adverse selection”. As a result, the buyer may still end up buying a “lemon” despite the rational price discount or it will choose to exit the market. Therefore, high information asymmetry will in theory lead to adverse selection and the potential breakdown of market transactions.

Consistent with the lemons problem, recent evidence shows that fewer cross-border acquisitions occur in countries with poor financial information disclosure (Rossi & Volpin, 2004). Strategy research suggests that information asymmetry exacerbates the difficulty of evaluating the value of targets’ resources as well as the potential synergies (Barney, 1988). But little is known how exactly information asymmetry affect acquirer’s return. Two competing predictions can be drawn from the literature in answering this question.

The Risks of Buying a “Lemon”

According to Akerlof’s (1970) ‘market for lemons’ theory, high information asymmetry will lead to adverse selection, where unattractive sellers are more likely to be on the market than attractive ones and buyers are likely to bear high risks of buying market “lemons”. By the same token, in the international acquisition setting, “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).

Auction theory yields a similar prediction (Kagel & Levin, 1986) when the bidder has poor information on the true value of the target. The winner of a sealed-bid auction of unknown common value tends to overestimate the true value of the auction object the most, resulting in

overpayment and the “winner’s curse” (Giliberto & Varaiya, 1989; Wilson, 1967). Recent studies on experimental economics show that higher information asymmetry leads to greater valuation uncertainty and subsequently larger estimation error. Since the winning bidder is the one with the highest positive estimation error, greater information opacity leads to more severe overpayment (Goeree & Offerman, 2002).

Taken together, it is reasonable to expect that when buying a target embedded in an opaque information environment, the acquirer will bear a higher risk of overpayment and subsequent lower returns. Therefore, we hypothesize that:

H1a: Acquirer’s return is negatively associated with information opacity of the target country.

The Potential to Get a “Bargain”

Another stream of literature, however, argues the opposite. The finance literature shows that high information asymmetry between managers and outsider investors decreases the effectiveness of investor protection and therefore lowers corporate valuation (La Porta, Lopez-de-Salinas, Shleifer & Vishny, 2002). Merton (1987) shows that the value of a firm is always lower in equilibrium 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 and a lower price.

Applying the above discount prediction to the M&A market, targets with less public information are more likely to be sold at a discount due to higher information asymmetry. Consistent with this argument, “the private company discount” literature reports that acquirers systematically receive more positive market reactions when acquiring private targets, which has

greater information opacity than public targets (Koeplin, Sarin, & Shapiro, 2000; Capron & Shen, 2007). The main rationale is that when there is limited public information about a target, the target has lower liquidity or lower tradability. This could translate to a thinly traded market, less bidding competition and hence, a lower market price. In other words, when buying a target with greater information opacity, the acquirer could potentially impose a relative price discount on the target, which may more than compensate for the increased information risk. As a result, acquirers may be able to get a “bargain” when buying a target with opaque information. Therefore, we lay out the competing hypothesis:

H1b: Acquirer’s return is positively associated with the information opacity of the target country.

A Contingency Approach: The Number of Bidders

These two competing hypotheses may appear contradictory to each other, while in reality they may not be. Empirical evidence on bidding in situations with high information asymmetry reveals support for both types of hypotheses but in different types of contexts. For example, studies of auctions on oil fields shows a “lemon” effect (Capen, Clap & Cambell, 1971), while the literature on acquisitions of private firms reveals a “bargain” type effect (Koeplin, et al., 2000). The key difference between these contexts is number of buyers and bidders.

So the two competing theories may be both valid but under different circumstances. Evidence from experimental economics also suggests that bidder’s return from bidding over an object with unknown value is contingent upon the level of competition (Kagel & Levin, 1986). When there are many bidders, information asymmetry favors the seller, while when there are limited numbers of bidders, information asymmetry favors the buyers. In a market for corporate

control, it is well known that the number of bidders is strongly and negatively related to acquirer returns in general (Barney, 1988; Bradley, Desai & Kim, 1988). However, when information is limited for the acquirers as in the case of information asymmetry, the effect of number of bidders can become even more pronounced.

Under information asymmetry, auction theory (Kagel and Levin, 1986) suggests that the higher the number of bidders the more severe the “winner’s curse”, while discount theory (Koeplin, Sarin & Shapiro, 2000) predicts that less tradability, measured by the number of bidders, increases the potential for “bargains”. Therefore, these two competing theories both rest on one common factor – the number of bidders.

If there is only one bidder, then there is sparse or no competition for the target. In absence of competition, the bidder is able to pose a “bargain” price when considering the information asymmetry. On the other hand, if there are multiple bidders, the target could leverage the competition among the bidders and let the high information asymmetry lead to more severe level of “winners’ curse”. The winner in a multiple bidder auction is the one that places a higher value on the target, which in the presence of information asymmetry can imply highest overvaluation error. As a result, the winner is more likely to buy a “lemon” when facing both information asymmetry and bidding war. In sum, information asymmetry could be a double-edged sword depending on the number of bidders. Therefore, we predict that

H2a: The effect of information opacity of the target country on the acquirer’s return is negative for a multiple-bidder deal (“lemon” effect)

H2b: The effect of information opacity of the target country on the acquirer’s return is positive for a single-bidder deal (“bargain” effect).

THE INTERACTION BETWEEN MACRO- AND MICRO- INFORMATION FACTORS

Similarity in Business

While information institutions affect the valuation of acquisition deals in general, the level of information asymmetry may vary by the type of acquisitions. For example, Balakrishnan and Koza (1993) point out those acquisitions involving dissimilar businesses often face much higher information asymmetry than combinations of similar businesses, due to acquiring firms' unfamiliarity with new business lines.

The closer the business of the target firm to that of the acquiring firm, the lower the informational constraints faced by the latter in evaluating the target assets. Acquirer managers in the same or similar line of business face fewer challenges in understanding the market context of the target firm, the trends and cycles in its business, the capabilities and weaknesses of the target firm and its management team as well as more accurately predicting the integration challenges (Anand & Singh, 1997; Hitt, Harrison, Ireland, & Best, 1998).

In addition, when making acquisitions in unfamiliar businesses, firms have to rely more on public financial reports to understand and evaluate the target firm's true value. On the other hand, when the target business is similar to the acquirer business, acquirer managers can more easily evaluate the 'intangibles' associated with the target firm, including the assets and decision making qualities that may not be represented among the tangible assets in the financial statements (Haleblian & Finkelstein, 1999). In this sense they may also more accurately predict the future synergies since they are able to have more insights and perspectives independent of the information presented by the target firm.

Therefore, for acquisitions in new or unfamiliar businesses, acquirers are more subject to the risks of overestimation and less able to exploit their experience and tacit knowledge to either obtain a “bargain” or mitigate the “lemon” problem. As a result we predict that:

H3a: The negative association between information opacity of the target country and the acquirer’s return (the “lemon” effect) will be weaker for the acquisitions in similar business than for those in dissimilar business.

H3b: The positive association between information opacity of the target country and the acquirer’s return (the “bargain” effect) will be stronger for acquisitions in similar business than for those in dissimilar business.

Stock as the Method of Payment

In the presence of information asymmetry, one contractual way to mitigate lemon problem is to offer payment to target shareholders in the form of stock of the acquiring firm rather than cash (Hansen, 1987). When the acquirer makes an acquisition by paying with its stock rather than in cash, it can provide several advantages in the presence of information asymmetry.

However, it is important to note that stock payment in general is associated with significantly lower returns for the acquirer. In a general case, use of stock as payment is interpreted by the investors as a signal of overvaluation of the acquirer stock when its management chooses to pay in stock rather than cash (Travlos, 1987). Further, in such a transaction, the value obtained from any synergies after deal completion are shared between the shareholders of both firms rather than completely appropriated by the acquirer shareholders as in the case of cash transactions (Amihud, Lev & Travlos, 1990). This can signal less confidence by acquirer managers in future synergies to the investors.

However, in the specific case of acquisitions involving a high degree of information asymmetry, the use of stock as payment can be beneficial to acquirer shareholders. The payment in stock helps the acquirer share the valuation risk with the target firm therefore, reducing the chance of overpayment. Further, payment in stock ensures a contingent payout, helping align bidder-target incentives and obtain a more optimal contract under information asymmetry (Officer, Poulsen & Stegemoller, 2006; Shen & Capron, 2006). Consequently, the acquirer shareholders are assured of the best efforts by the target firm to achieve synergies. Given this risk-sharing as well as incentive aligning benefits of stock payment, we would expect that the “lemon” risk of information opacity will be weaker and the “bargain” effect of information opacity will be stronger for firms choosing stock payment. As a result, we propose:

H4: The information opacity of the target country will be associated with more positive acquirer returns when payment is made in stock.

Partial versus Full Acquisitions

Another choice that firms can make under uncertainty and information asymmetry is the use of partial or staged acquisitions (Balakrishnan & Koza, 1993). Previous literature suggests that under high information asymmetry, firms would choose partial ownership, rather than outright acquisitions, to mitigate the risks of overpaying for the target and incurring a high transaction cost (Hennart & Reddy, 1997; 2000). A partial acquisition enables the acquiring firm to limit its initial risk and investment, while also providing an opportunity to obtain more information before making further investments. Such an opportunity can be quite valuable since it can provide the acquiring firm with an “insider’s” perspective and also more accurately evaluate the business by using the assets of the target firm.

Consequently, when acquiring targets in countries with poor information institutions, a partial acquisition may be more appropriate than a full acquisition. According to Chen and Hennart (2004), the ownership stake of partial acquisitions gives the targets the incentives to refrain from information misrepresentation or cheating, thereby enhancing the performance of partial acquisitions. Consistent with this argument, Balakrishnan and Koza (1993) find that joint ventures perform better than full acquisitions under high information asymmetry.

However, this result does not take into account the potential endogeneity of this choice. In our study, we consider the choice of making partial acquisitions as well as the results from making such a choice. If firms endogenously choose partial acquisitions over full acquisitions based on the quality of the target country's information institutions, those firms may be more effective in mitigating information problems, and perform better than those choosing full acquisitions. In sum,

H5a: Acquirers' tendency to choose a partial acquisition is positively associated with the information opacity of the target country.

H5b: When the information opacity of the target country is high, acquirers choosing a partial acquisition perform better than those choosing a full acquisition.

METHODS

Sample

The original sample was drawn from Thomson Financial's SDC Platinum database based on the following criteria: 1) international acquisitions by the U. S. firms (parent) with controlling shareholding of more than 50 percent during 1990-2007; 2) the targets must be public firms since our theoretical variable is information institutions governing public firms' financial

transparency; 3) Deal status must be “completed”. Stock returns were pulled from the CRSP database and other firm-level control variables were matched from the COMPUSTAT database. We drew data on country-level information institutions from the Center for Financial Analysis and Research (CIFAR). Other country-level control variables were collected from the World Bank. After merging these data sources, the final sample for hypothesis testing is composed of 719 international acquisitions in 36 target countries (See Table 1 for target country distribution in the sample). In addition, 527 partial acquisitions defined as less than 95 percent shareholding are included when testing the ownership choice hypothesis.

[Insert Table 1 about here]

Measurement

Dependent variable: Acquirer returns were measured by market reaction to an acquisition announcement in the sense that if the price the acquirer paid exceeds the net present value of the target, then market will react negatively and if the price paid is less than the net present value of the target then the market will react positively to the transaction. Using event study methodology, we first calculated the firm-specific expected return by estimating a market model: $R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$, $t \in [-250, -50]$, where R_{it} is firm i 's stock return on day t , R_{mt} is the rate of return on the market portfolio of stocks on day t , and ε_{it} is the error term assumed to be normally distributed. The estimated expected returns above were then used to calculate the risk-adjusted abnormal returns (i.e., $AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt})$) 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; Reuer & Koza, 2000).

Theoretical variables: The measures of information institutions were adopted from the Bushman et al. (2004) study, which reports the cross-country variation in corporate transparency in the year of 1995. Their measures have also been used in other recent studies such as Frost, Gordon & Hayes (2006) and Bae, Tan & Welker (2008). 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. In addition to the number of accounting items disclosed, richness of information also depends on the frequency of financial reporting (e.g. annually versus quarterly) as well as the consolidation of interim report (Bushman et al, 2004). As a result, our measure of information institutions that governs financial information production is a comprehensive measure of the three important information aspects: the amount of disclosure, the frequency of disclosure and the consolidation of interim reports. These three aspects represent the richness, timeliness and accuracy of financial information that relevant to firm valuation (Bushman et al., 2004). Since the purpose of this paper is to study the consequences of a poor information environment, we inversely coded this measure and labeled it as the “Information Opacity” variable.

Control variables: We controlled for several firm characteristics that may affect the market reaction to the acquisition announcements, and 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 acquisition, based on SDC data. The experience variable was transformed by the natural logarithm of 1 plus the number of acquisition experience to correct for the skewness of the experience variable. In addition to the international acquisition experience, other forms of international experience may also help focal firms become familiar with the institutional environment of foreign countries' and overcome the liability of foreignness. Beyond the general level of internationalization and international acquisition experience, we also constructed a more specific measure of the target country's acquisition experience. Prior target nation acquisition experience may help tremendously in interpreting the local financial reporting practices, as well as legal and cultural issues related to acquisitions in that particular country. *Target country acquisition experience* is coded as a dummy variable with 1 indicating that the acquirer has prior acquisition experience in the target nation. Multiple-bid is a dummy variable taking value 1 when there are two or more bidders for the target, and 0 otherwise.

Acquirer firm size may affect firms' international experience and performance and is measured by the logarithm of the acquirer's total assets at the end of the year prior to the focal acquisition (Vermeulen & Barkema, 2001). *Prior performance*, measured by the acquirer's return on assets (ROA) at the end of the year before the focal acquisition, is also controlled for,

since past profitability may influence future performance (Lee & Caves; 1998; Markids & Ittner, 1994). Similarity in business between the acquirer and the target was found to be highly correlated with acquisition performance. The market reacts more positively to related acquisitions (Hitt, Harrison, Ireland, & Best, 1998; Singh & Montgomery, 1987). We construct the variable “*Dissimilar business*” to measure whether the target is in the same business as the acquirer according to the similarity of SIC code of the acquirer and the target (Haleblian & Finkelstain, 1999). Specifically, if the acquirer and the target do not share the same 3-digit SIC code, “Dissimilar business” is coded 1 and 0 otherwise. Finally, the impact of information asymmetry may differ for different industries. For example, the volatility of firm valuation in the service industry is often bigger than that of manufacture industry (CIFAR, 1995). To control for the potential heterogeneity of information sensitivity across different industries, we generate an industry dummy variable. Service industry are coded 1 and any other industry are coded 0 (Reuer, et al. 2004).

To better test the effects of information institutions, we also control for other potentially confounding institutional factors in a target country. These institutional factors are *target country growth*, measured by the target country’s GDP growth in the past 5 years, and the quality of the *rule of law* published in the World Bank Report of 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 up the cultural dimensions: $CD_{(j,k)} = \sum \{ (I_{ij} - I_{ik})^2 / V_i \} / 4$, where $CD_{(j,k)}$ 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.

Method

Our estimation methods were chosen based on several econometric issues and challenges. First, 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 may simply absorb the effects of all time-invariant country-level variables into the country dummy variable and therefore make it impossible to disentangle the effect of a certain country-level variable from the effect of other country-level variables (Kennedy, 2003). The country random effects model, on the other hand, does allow the researcher to examine the impact of one specific country-level variable while controlling for other country-level variables. Therefore, given our main theoretical interest in country-level institutional variables, the GLS country random effect model is more relevant 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 check whether this assumption is reasonable in our sample, we conducted a Hausman test and found the random effect model is as consistent as the fixed-effect model.

Second, when testing the performance difference between partial and full acquisitions, we controlled for the endogeneity of the ownership choice using a treatment effect model (Greene, 2003:787-789) similar to Heckman's two-stage model that controls for selection bias. We use political stability as the instrument variable of ownership choice in the sense that political stability increases firms' tendency to choose full ownership but has no strong impact on firm performance.

In addition, we conducted further robustness checks, wherever appropriate. These are described in later sections.

FINDINGS

Table 2 presents the descriptive statistics and the correlations, from which we can see that the average market reaction to an international acquisition deal is nonnegative, i.e., the mean is 0, but there is a large variance among different deals (standard deviation being 0.07). The acquirer's prior performance is significantly associated with the market reactions to acquisition announcements ($p < 0.05$). Firm size is positively correlated with international acquisition experience and target country acquisition experience. And at the country-level, country economic growth, culture distance, rule of law and information opacity are all significantly correlated ($p < 0.05$).

[Insert Table 2 about here]

Table 3 reports the empirical results testing hypotheses 1 and 2. Model I is the benchmark model, from which we could see that acquirers' prior performance has a negative effect on the market reaction to international acquisitions ($p < 0.05$), which is consistent with the hubris hypothesis. The business similarity and prior experience do not reveal a significant impact on acquirer's return, consistent with the recent meta-analysis of empirical acquisitions studies (King, Dalton, Daily & Covin, 2004).

Model II tests Hypothesis 1a and 1b, which predicts the opposite association between market reactions and the quality of target country information institutions in an international acquisition. Model II shows that overall information opacity has a positive effect on acquirers' cumulative abnormal returns ($p < 0.05$). In other words, the bargain effect under high information

asymmetry is more dominant in the overall sample. The standardized coefficient for information opacity is about 0.01. In other words, one unit increase in information opacity leads to 1% increase in acquirer's CAR. Given that on average the acquirer's return is about zero (Jensen and Ruback, 1986), a 1% improvement in 3-day CAR is economically quite significant.

Hypotheses H2a and H2b state that high information opacity will have a “bargain” effect for single-bidder acquisitions and a “lemon” effect for multiple-bidder acquisitions. Model III and IV test the contingency hypotheses by splitting the sample into single versus multiple bidder samples. As it is shown, the coefficient for single-bidder sample is significantly positive ($p < 0.05$) suggesting a “bargain” effect while the coefficient for the multiple-bidder sample is significantly negative ($p < 0.10$) indicating a “lemon” effect instead. Notice the number of observations for the multiple-bidder sample is only 83. Given the limited power of a small sample, we think this evidence (albeit $p < 0.10$) provides reasonably strong support for the “lemon” hypothesis. Model V is the full sample interaction model examining whether the impact of information opacity on acquirer return is significantly different for single-bidder versus multiple-bidder subsamples. The result suggests that the difference is indeed statistically significant. In sum, we find that impact of information opacity of the target country on acquirer return could be bad or good. For single-bidder acquisitions, greater information opacity of the target country offers more bargain opportunities while for multiple-bidder acquisitions it increases the risk of overpaying for a “lemon” and hence exacerbates “the winner's curse.”

[Insert Table 3 about here]

We conducted further robustness checks to further confirm these above results. The two issues that we were concerned about are: sample selection bias in our majority acquisition

sample, and potential endogeneity in the determination of number of bidders. We discuss these problems and the additional tests we conducted².

First, the results described above are based on the analysis of data on majority acquisitions. Consequently, we may encounter sample selection bias because this analysis precludes partial acquisitions without controlling for the choice effect (Shaver, 1998; Heckman, 1979). If there are some latent variables that correlate with both the choice and the performance of full acquisitions, then the estimation can be biased. Therefore, we conducted these tests again, controlling for the sample selection bias using Heckman's (1979) two-stage model with the first stage explaining the choice of majority acquisitions. The results are similar to those of the model reported in the paper.

Second, there may be an additional endogeneity related problem in the determination of the number of bidders. It is possible that high information asymmetry will reduce the number of bidders because of the valuation difficulty. In other words, the variable *multiple-bid* may be an endogenous variable, which may introduce bias in our model estimation. To control for this potential endogeneity, we performed a two-stage model with a first stage equation estimating the number of bidders, using GDP growth as an instrument variable. We think this is a good instrument in the sense that high GDP growth attracts larger number of bidders but GDP growth by itself is not strongly correlated with performance. Our results show that the endogeneity issue is not statistically significant ($p < 0.34$), and even after we control for this potential endogeneity, our results hold.

Hypothesis 3 has two parts, 3a and 3b. H3a is contingent upon finding the “lemon” effect and H3b is contingent upon finding the “bargain” effect in our first hypothesis. Given that we

² The tables corresponding to these additional tests are not reported in the paper in the interest of conserving space and because they do not change the results substantively. However, these are available upon request from the authors.

found the overall “bargain” effect to be more dominant, H3a is not relevant here and we should test H3b. H3b states that the “bargain” effect of information opacity on acquirer return will be weaker for acquisitions in similar business than those in dissimilar business. Table 4 reports the models for acquisitions in similar versus dissimilar business respectively. Model I demonstrates the significantly positive association between acquirer returns and the information opacity of the target country for acquisitions in similar business ($p < 0.01$), while model II reports insignificant although still positive association for acquisitions in dissimilar business, consistent with a weaker “bargain” effect. This result remains substantively unchanged when we repeated this test with the sub-sample of single-bid acquisitions rather than the full sample. In model III, the full sample interaction analysis further confirms that the difference in the “bargain” effect between acquisitions in similar business than those in dissimilar business is indeed statistically significant. Hypothesis 3b is therefore supported.

[Insert Table 4 about here]

Table 5 shows the results regarding Hypothesis 4, i.e., about the interaction effect of stock payment. We hypothesize that stock payment enables the acquirer to share risks with the target therefore it helps mitigate the “lemon” problem or strengthens the “bargain” effect under greater information asymmetry. Since we found the overall “bargain” effect to be more dominant, table 5 tests whether the positive association between information opacity and acquirer return is stronger when stock of the acquiring firm is used as the method of payment. Table 5 shows that this interaction effect is not significant. Therefore H4 is not supported. We speculate on several possible reasons why this hypothesis is not supported in the discussion section. However, the main effect of using stock payment, consistent with the previous literature, has a significant negative effect for acquirer’s return when acquiring public firms (Travlos, 1987). As mentioned

earlier, this negative effect emanates from the information asymmetry between the acquirer managers and its shareholders, and the use of stock is interpreted as a signal of stock overvaluation or lack of confidence in post acquisition synergies.

[Insert Table 5 about here]

Table 6 reports the test of Hypothesis 5a, which relates to the choice between partial versus full acquisitions, contingent upon firm-level and target country-level factors. Model I is the control model from which we could see that firms undertaking unrelated acquisitions are more likely to choose partial acquisitions ($p < 0.05$). The higher the quality of the rule of law, the lower is 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 information opacity is positively associated with the likelihood to choose partial acquisitions ($p < 0.05$). Therefore, Hypothesis 5a is also supported.

[Insert Table 6 about here]

Table 7 reports the test of Hypothesis 5b, which states that partial acquisitions chosen to overcome the information problems under poor information institutions outperform full acquisitions. Model I is the control model. Model II tests the performance of partial acquisitions when controlling for the endogenous choice of partial acquisitions. We use political stability as an instrument of partial acquisition choice, since firms are more likely to choose a partial acquisition under high political risk (Delios & Henisz, 2003). Model II clearly shows that after controlling the endogeneity, 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, these results support Hypothesis 5b, i.e., in response to

greater information opacity of the target country, partial acquisitions outperform full acquisitions.

[Insert Table 7 about here]

DISCUSSION

Contribution and Implications

Overall, this study sheds light on how information asymmetry affects acquirer performance in the international market for corporate control. It provides an empirical test against the backdrop of two competing theoretical perspectives on acquirers' shareholder wealth under information asymmetry: one predicts a negative market reaction as a result of overpaying for a "lemon", while the other predicts a positive market reaction because opaque information deters the number of buyers and therefore those who overcome information risk may reap the benefit of buying a "bargain". By exploring how bidders' gains in international acquisitions vary with different levels of information asymmetry, our study provides clear empirical evidence that in a market for corporate control, high information asymmetry provides bargain opportunities for single-bidder acquisitions but increases the risks of buying a "lemon" when there are multiple bidders. Furthermore, the bargain effect only holds for acquisitions in similar business, not for those in dissimilar business.

More broadly, the implications of this study may not be limited solely to the international markets for corporate control. The theoretical implications of these findings could be extended to the general case of information asymmetry in all strategic factor markets (Barney, 1986; Dierickx and Cool, 1989) since they share common characteristics with the market for corporate control (Barney, 1988). Existing theories suggest that information asymmetry could affect the

buyer both positively and negatively. This study suggests that firms need to consider the level of competition in the market for strategic assets and factors to resolve the tension between these two perspectives.

In addition, it also provides another perspective in the understanding of the performance of international acquisitions across countries, where mixed empirical results were found in the literature (Markides & Ittner, 1994; Datta & Puia, 1995; Lee & Caves, 1998; Anand, Capron, & Mitchell, 2005). Also, prior studies have mostly focused on informal institutions in international acquisitions, such as national culture (e.g., Morisini et al, 1998), and little is known about the role of formal institutions, in terms of how they matter, in what way, and to what extent. We argue that target country's information institutions governing financial reporting and disclosure affect both firm strategy (e.g. ownership choice) and performance in the global takeover market. By focusing on the important formal information institutions, our fine-grained analysis of the target country's institutions may help to further tackle the performance heterogeneity of international acquisitions. Our results show that information institutions do matter significantly and the effect differs for different types of acquisitions. It therefore highlights the institutional contingencies of business strategies in different countries and economic regions.

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 reveals potential "bargain" opportunities when acquiring targets in informationally opaque countries. Opaque information reduces the tradability of the target and can enable the acquirer to negotiate a more favorable price. On the hand, the acquirer should be aware of the high risks of buying a "lemon" when there is a bidding war and the target country has high information opacity. It is important to note the double-edged sword of information asymmetry

for firms interested in acquiring targets in emerging economies. In addition, when information asymmetry is quite high due to the poor information institutions in the target country, acquiring a similar business or choosing partial acquisitions may mitigate the adverse effect of information asymmetry.

For target firms, finding ways to improve information transparency could attract competition and boost the acquisition price. However, whenever there is a bidding war, revealing more information may actually reduce the price. This is an interesting dilemma for potential target firms, and offers a possible explanation for why some firms may be reluctant to provide more information publicly.

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 their firms in the global capital market, national governments should strive for a more transparent information environment to facilitate efficient resource allocation.

Limitations and Future Directions

It is important to think further about the interpretation of our results. It is possible that investors react favorably to acquirers when targets are embedded in financially-opaque countries because they see the potential international arbitrage opportunities on information asymmetry. When a financially transparent acquirer buys an opaque target, investors would expect the acquirer to improve the financial transparency of the target, therefore enhance the market value of the target. Such an explanation would be complementary to the logic used in this study to derive hypotheses since to the extent to which the transparency enhancement value can be captured by the acquirer or target still depends on their relative bargaining power, which is

contingent on the number of bidders. It will be interesting to elaborate upon the information arbitrage hypothesis and study it in greater depth in the future. One way to do this would be to study acquisitions made by firms from medium or low levels of transparency. Since our sample consists of acquisitions made by US firms, which are among the most transparent in the world, we do not have the necessary variance to explicitly study this hypothesis.

This study also has several other empirical and limitations, which merit further analysis. For example, our empirical results did not support that hypothesis regarding the positive interaction between stock payment and information opacity. We speculate on several reasons why stock payment does not pay when acquiring financially-opaque targets: Firstly, some target shareholders may prefer cash for their liquidity needs; therefore they may reject stock offers (Faccio & Masulis, 2005). Second, some country regulations prohibit ownership of foreign equity, hence not permitting acquisitions using stock payment, for example, in some emerging economies. Third, due to higher information asymmetry of holding non-domestic stocks, shareholders are more willing to hold home country's stocks, reflecting a 'home-bias' (Lewis, 1999). Finally, acquirer shareholders' may not want to share ownership with target shareholders in fear of loss of control (Amihud, Lev & Travlos, 1990). Future studies may test these possible reasons to better understand the effect of method of payment in mitigating information asymmetry. Besides the method of payment, alternative mechanisms to deal with information asymmetry resulting from poor information institutions could also be explored. Such mechanisms may include cross-listing of stock, sequential entry mode choices, contingency payouts for acquisitions, and due diligence by hiring consulting firms.

Due to the large amount of missing values regarding the market reaction to the target firms, we were unable to assess the information asymmetry effect on the shareholder wealth of the

target firms located in low-quality information environments. In the future, it would be interesting to investigate how low information institutions affect the combined value creation of international acquisitions as well as the division of synergy gains between the acquirer and the target. Studies using better measures of information opacity should also be undertaken in the future.

CONCLUSION

This study investigates the information asymmetry problem in international acquisitions resulting from poor information institutions in the target country. In testing two competing hypotheses on how the information institutions of a target country affect the acquirer's shareholder wealth, we find that greater information opacity of the target country is associated with more positive market reactions (consistent with a dominating "bargain" effect) when there is only one single bid. Whenever there is a bidding war, the association becomes negative, suggesting a "lemon" effect. In addition, the "bargain" effect only holds for acquisitions in similar businesses. 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 acquisition performance in the international takeover market.

Table 1: Country Distribution for 719 Majority Acquisitions in the Sample

Target Nation	Freq.	Percent	Cum.
Argentina	5	Japan	18
Australia	44	Mexico	15
Austria	5	Netherlands	8
Belgium	5	New Zealand	5
Brazil	15	Norway	16
Canada	203	Pakistan	2
Chile	7	Peru	6
Czech Republic	1	Philippines	3
Denmark	4	Portugal	1
Finland	1	Singapore	6
France	50	South Africa	3
Germany	45	Spain	5
Greece	2	Sweden	23
Hong Kong	8	Switzerland	6
India	17	Thailand	2
Ireland-Rep	7	Turkey	1
Israel	15	United Kingdom	151
Italy	12	Venezuela	2

Table 2: Descriptive Statistics

	Mean	Std	1	2	3	4	5	6	7	8	9	10	11
CAR(-1,1)	0.00	0.07	1										
Dissimilar business	0.53	0.50	0.05	1.00									
ROA	0.02	0.17	<u>-0.21</u>	0.01	1.00								
LogAsset	7.82	2.60	-0.06	0.07	<u>0.27</u>	1.00							
Int'l acq experience	9.70	25.54	-0.02	<u>0.09</u>	0.03	<u>0.52</u>	1.00						
Target country acq exp	0.29	0.46	0.00	0.03	0.04	<u>0.31</u>	<u>0.36</u>	1.00					
Multiple bid	0.12	0.32	0.00	0.03	0.05	0.01	-0.03	-0.04	1.00				
Service industry	0.31	0.46	-0.02	-0.04	-0.04	0.03	<u>0.10</u>	0.06	-0.05	1.00			
GDP growth	0.02	0.01	0.00	-0.03	0.03	<u>0.13</u>	-0.01	-0.05	<u>-0.10</u>	-0.02	1.00		
Culture distance	0.83	1.05	0.01	0.01	<u>0.09</u>	<u>0.25</u>	0.07	-0.04	<u>-0.12</u>	-0.09	<u>0.49</u>	1.00	
Rule_law	1.51	0.64	0.01	0.07	-0.03	<u>-0.23</u>	0.00	0.04	<u>0.11</u>	0.09	<u>-0.40</u>	<u>-0.62</u>	1.00
Information opacity	85.48	13.56	-0.05	0.00	<u>-0.13</u>	<u>-0.21</u>	<u>-0.08</u>	0.05	0.07	0.03	<u>-0.43</u>	<u>-0.46</u>	<u>0.43</u>

(N=719, Correlations significant at 5% level are underscored)

**Table 3: The Impact of Information Opacity on Acquirer's Return
Bargain Effect for Single-bid Sample and Lemon Effect for Multiple-bid Sample**

VARIABLES	I Control Model	II Full Sample	III Single Bid Sample	IV Multiple-bid Sample	V Full Sample
	CAR(-1,1)	CAR(-1,1)	CAR(-1,1)	CAR(-1,1)	CAR(-1,1)
Constant	-0.0086 (0.0149)	-0.0066 (0.0149)	-0.0029 (0.0157)	-0.0249 (0.0556)	-0.0066 (0.0149)
ROA	-0.0936*** (0.0163)	-0.0981*** (0.0164)	-0.1029*** (0.0171)	0.0142 (0.0650)	-0.0989*** (0.0163)
LogAsset	0.0003 (0.0015)	0.0004 (0.0015)	-0.0001 (0.0016)	0.0034 (0.0042)	0.0004 (0.0015)
Int'l acq experience	-0.0022 (0.0034)	-0.0033 (0.0034)	-0.0025 (0.0038)	-0.0109 (0.0075)	-0.0039 (0.0035)
Target country acq exp	0.0036 (0.0069)	0.0056 (0.0069)	0.0064 (0.0076)	0.0012 (0.0166)	0.0066 (0.0069)
Dissimilar business	0.0081 (0.0053)	0.0080 (0.0052)	0.0085 (0.0057)	0.0146 (0.0121)	0.0088* (0.0052)
Service industry	-0.0044 (0.0057)	-0.0046 (0.0057)	-0.0065 (0.0061)	0.0156 (0.0137)	-0.0044 (0.0057)
GDP growth	-0.0484 (0.2048)	-0.1704 (0.2102)	-0.2807 (0.2265)	0.3845 (0.7150)	-0.2507 (0.2138)
Culture distance	0.0037 (0.0034)	0.0024 (0.0034)	0.0028 (0.0037)	0.0050 (0.0100)	0.0032 (0.0035)
Rule_law	0.0032 (0.0053)	0.0056 (0.0054)	0.0068 (0.0057)	-0.0073 (0.0208)	0.0064 (0.0054)
Information opacity		0.0091** (0.0038)	0.0130*** (0.0042)	-0.0148* (0.0090)	0.0123*** (0.0041)
Multiple bid					-0.0051 (0.0091)
Infor_opacity * Multiple bid					-0.0208** (0.0100)
Observations	719	719	636	83	719
R-squared	0.05	0.06	0.07	0.10	0.06
N (countries)	36	36	35	15	36

Standardized coefficient reported. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

**Table 4: The Impact of Information Opacity on Acquirer's Return
Bargain Effect for Acquisitions in Similar Business versus in Dissimilar Business**

VARIABLES	I Acquisitions in similar business CAR(-1,1)	II Acquisitions in dissimilar business CAR(-1,1)	III Full-Sample CAR(-1,1)
Constant	-0.0108 (0.0211)	0.0140 (0.0205)	-0.0091 (0.0149)
ROA	0.0473* (0.0265)	-0.1676*** (0.0200)	-0.0989*** (0.0163)
LogAsset	0.0012 (0.0021)	-0.0014 (0.0020)	0.0006 (0.0015)
Multiple bid	0.0035 (0.0116)	0.0036 (0.0109)	0.0045 (0.0082)
Int'l acq experience	-0.0048 (0.0048)	-0.0005 (0.0047)	-0.0034 (0.0034)
Target country acq exp	-0.0033 (0.0095)	0.0115 (0.0096)	0.0057 (0.0069)
Service industry	-0.0137* (0.0076)	0.0030 (0.0078)	-0.0047 (0.0056)
GDP growth	-0.3588 (0.2996)	0.0223 (0.2831)	-0.1615 (0.2095)
Culture distance	0.0057 (0.0049)	-0.0014 (0.0047)	0.0031 (0.0034)
Rule_law	0.0088 (0.0075)	0.0017 (0.0078)	0.0076 (0.0054)
Information opacity	0.0141*** (0.0050)	0.0026 (0.0054)	0.0177*** (0.0048)
Dissimilar business			0.0031 (0.0055)
Information opacity *Dissimilar business			-0.0178*** (0.0063)
Observations	338	381	719
R-squared	0.06	0.18	0.07
N (countries)	28	32	36

Standardized coefficient reported. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 5: The Impact of Information Opacity on Acquirer's Return: Method of Payment

VARIABLES	(1)	(2)	(3)
	CAR(-1,1)	CAR(-1,1)	CAR(-1,1)
Constant	-0.0066 (0.0149)	0.0083 (0.0151)	0.00801 (0.0151)
ROA	-0.0981*** (0.0164)	-0.111*** (0.0164)	-0.110*** (0.0165)
LogAsset	0.0004 (0.0015)	-0.0009 (0.0015)	-0.0008 (0.0015)
Dissimilar business	-0.0033 (0.0034)	0.00657 (0.0051)	0.00674 (0.0052)
Int'l acq experience	0.0056 (0.0069)	-0.0034 (0.00341)	-0.00345 (0.00341)
Target country acq exp	0.0080 (0.0052)	0.0068 (0.0069)	0.0069 (0.0068)
Service industry	-0.0046 (0.0057)	-0.0008 (0.0056)	-0.0008 (0.0056)
GDP growth	-0.1704 (0.2102)	-0.180 (0.208)	-0.194 (0.208)
Culture distance	0.0024 (0.0034)	0.002 (0.00340)	0.0022 (0.00340)
Rule_law	0.0056 (0.0054)	0.0056 (0.0053)	0.0059 (0.0053)
Information opacity	0.0091** (0.0038)	0.00807** (0.0037)	0.00899** (0.0039)
Stock payment		-0.0366*** (0.0084)	-0.0414*** (0.0104)
Information opacity * Stock pay			-0.0081 (0.0105)
Observations		719	719
R-squared	0.06	0.08	0.08

*** p<0.01, ** p<0.05, * p<0.1 Standard errors in parentheses

Table 6: Information Opacity and the Choice of Partial Acquisitions^a

VARIABLES	I	II
	partial	partial
Constant	-1.1849*** (0.2914)	-1.1950*** (0.2635)
ROA	-0.0614 (0.1446)	-0.1453 (0.1442)
LogAsset	0.1579*** (0.0326)	0.1620*** (0.0326)
Dissimilar business	0.2134** (0.1059)	0.2036** (0.1035)
Int'l acq experience	-0.0990 (0.0937)	-0.1225 (0.0897)
Target country acq exp	0.2195** (0.0948)	0.2620*** (0.0871)
Service industry	-0.1612* (0.0947)	-0.1782* (0.0955)
GDP growth	8.7354* (4.5981)	6.3447 (4.7233)
Culture distance	0.1011 (0.0933)	0.0919 (0.0930)
Rule_law	-0.2388* (0.1265)	-0.1705* (0.0962)
Information opacity		0.1869** (0.0811)
Pseudo R-square	0.14	0.15
Observations	1246	1246

^a Probit model of the binary choice. Standardized coefficient reported.

*** p<0.01, ** p<0.05, * p<0.1 Standard errors in parentheses

Table 7 Market Reaction to Full Acquisitions controlling Ownership Choice^a

VARIABLES	I CAR(-1,1)	II CAR(-1,1)
Constant	0.0107 (0.0091)	0.0796*** (0.0120)
ROA	-0.0909*** (0.0124)	-0.0780*** (0.0146)
LogAsset	-0.0008 (0.0009)	-0.0049*** (0.0012)
Dissimilar business	0.0014 (0.0034)	-0.0037 (0.0041)
Int'l acq exp	-0.0000 (0.0021)	0.0039 (0.0025)
Target country acq exp	0.0021 (0.0043)	-0.0061 (0.0051)
Service industry	-0.0003 (0.0037)	0.0035 (0.0044)
GDP growth	-0.1449 (0.1217)	-0.3637** (0.1452)
Culture distance	0.0004 (0.0020)	-0.0023 (0.0024)
Rule_law	0.0023 (0.0031)	0.0077** (0.0037)
Information opacity	0.0043** (0.0022)	0.0004 (0.0026)
Partial acquisitions		0.0854*** (0.0062)
Inverse Mills Ratio		-0.0512*** (0.0034)
Wald Statistics	69.46 ***	227***
Observations	1246	1246

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

^a Market reaction to international acquisitions, controlling the endogeneity of the choice between full and partial acquisitions using instrument variable political stability as well as other variables specified in model 2, Table 6.

REFERENCES:

- Akerlof, G. A. 1970. The market for 'lemons': Qualitative uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84: 488–500.
- Alford, A., Jones, J., Leftwich, R., & Zmijewski, M. 1993. The relative informativeness of accounting disclosures in different countries. *Journal of Accounting Research*, 31(3): 183-223.
- Ali, A., & Hwang, L. 2000. Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research*, 38:1-21.
- Amihud, Y., B. Lev, & N. Travlos, 1990. Corporate control and the choice of investment financing: The case of corporate acquisitions. *Journal of Finance*, 45: 603-616.
- Anand, J., Capron, L., & Mitchell, W. 2005. Using acquisitions to access multinational diversity: Thinking beyond the domestic versus cross-border M&A comparison. *Industrial & Corporate Change*, 14(2):191-224.
- Anand J., & Singh H. 1997. Asset redeployment, acquisitions and corporate strategy in declining industries. *Strategic Management Journal*, 18: 99-118.
- Bae, K., Tan, H., & Welker, M. 2008. International GAAP differences: The impact on foreign analysts. *Accounting Review*, 83(3): 593-628.
- Balakrishnan, S., & M. Koza P. 1993. Information asymmetry, adverse selection, and joint ventures. *Journal of Economic Behavior and Organization*, 20: 99–117.
- Ball R., Kothari, S. & Robin, A. 2000. The effect of institutional factors on the properties of accounting earnings. *Journal of Accounting Research*, 19:1-51.
- Barney, J. 1986. Strategic factor markets: Expectations, luck and business strategy. *Management Science*, 32(10):1231-1241.
- Barney, J. 1988. Returns to bidding firms in mergers and acquisitions: Reconsidering the relatedness hypothesis. *Strategic Management Journal*, 9:71-78.
- Barry, C., & Brown, S. 1985. Differential information and security market equilibrium. *Journal of Financial and Quantitative Analysis*, 20: 407–422.
- Bradley, M. Desai, A. Kim, E., 1988. Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms. *Journal of Financial Economics*, 21:3-40.
- Bushman, R., Piotroski, J., & Smith A. 2004. What determines corporate transparency? *Journal of Accounting Research*, 42(2):207-251.
- Capen E.C., Clapp R.V. & Campbell W.M., 1971. Competitive bidding in high risk situations. *Journal of Petroleum Technology*, 23: 641-653.
- Capron, L. Shen, J. 2007. Acquisitions of private vs. public firms: Private information, target selection, and acquirer returns. *Strategic Management Journal*, 28 (9): 891-911.

Center for International Analysis and Research (CIFAR). 1995. *International Accounting and Auditing Trends*, 4th edition. Princeton, NJ: CIFAR Publications Inc.

Chen S., & Hennart, J. 2004. A hostage theory of joint ventures: why do Japanese investors choose partial over full acquisitions to enter the United States? *Journal of Business Research*, 57(10): 1126-1134.

Collins D., & Kathari, S. 1989. An analysis of intertemporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics*, 11:143-182.

Datta D., & Puia G. 1995. Cross-border acquisitions: An examination of the influence of relatedness and cultural fit on shareholder value creation in U.S. acquiring firms. *Management International Review*, 35(4): 337-359.

Delios, A. & Henisz, W. 2003. Policy uncertainty and the sequence of entry by Japanese firms, 1980-1998. *Journal of International Business Studies*. 34 (3): 227-241

Dierickx, I.; Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35 (12): 1504-1511.

Easley, D., & O'hara M. 2004. Information and the cost of capital. *Journal of Finance*, 59(4):1553-1583.

Faccio, M., J. McConnell, and D. Stolin, 2006. Returns to acquirers of listed and unlisted targets. *Journal of Financial and Quantitative Analysis*, 41:197-220.

Frost, C., Gordon, E., & Hayes, A. 2006. Stock exchange disclosure and market development: An analysis of 50 international exchanges. *Journal of Accounting Research*, 44(3): 437-483.

Greene, W. 2003. *Econometric Analysis*. 5th Edition. Pearson Education International.

Giliberto M. & Varaiya, N. 1989. The winner's curse and bidder competition in acquisitions: Evidence from failed bank auctions. *Journal of Finance*, 44 (1):59-75.

Goeree, J & Offerman, T. 2002. Efficiency in auctions with private and common values: an experimental study. *American Economic Review*, 92(3):625-643.

Haleblian J. & Finkelstein, S. 1999. The influence of organizational acquisition experience on acquisition performance: A behavioral learning perspective. *Administrative Science Quarterly*, 44: 29-56.

Hansen, R., 1987. A theory for the choice of exchange medium in mergers and acquisitions. *Journal of Business*, 60: 75-95.

Healy, P. & Palepu, K. 2001. Information asymmetry, corporate disclosure, and the capital markets: a review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31: 404-440.

Heckman, J. 1979. Sample selection bias as a specification error. *Econometrica*, 47:153-161.

Hennart, J.-F. & Reddy, S. 1997. The choice between mergers/acquisitions and joint ventures: The case of Japanese investors in the United States. *Strategic Management Journal*, 18 (1): 1-12.

- Hitt, M.A., Harrison, J., Ireland, R.D., & Best A. 1998. Attributes of successful and unsuccessful acquisitions of US firms. *British Journal of Management*, 9:91-114.
- Hope. O. 2003. Disclosure practices, enforcement of accounting standards and analyst forecast accuracy: An international study. *Journal of Accounting Research*, 41:235-272.
- Jensen, M., and Ruback, R. 1983. The market for corporate control. *Journal of Financial Economics* (April): 5-50.
- Kagel, J. and Levin, D. 1986. "The winner's curse and public information in common value auctions. *American Economic Review*, 76(5): 894-920.
- Kennedy, P. 2003. *A Guide to Econometrics*. 5th edition. The MIT Press, Cambridge, Massachusetts.
- King, D. R.; Dalton, D. R.; Daily, C. M.; Covin, J. G. 2004. Meta-analyses of post-acquisition performance: Indications of unidentified moderators". *Strategic Management Journal*, 25 (2): 187-200.
- Kogut, B. and Singh, H. 1988. The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3): 411-433.
- Koeplin, J., Sarin, A., and Shapiro, A. 2000. The private company discount. *Journal of Applied Corporate Finance*, 12(4):94-101.
- La Porta R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R., 2002. Investor protection and corporate valuation. *Journal of Finance*, 57(3): 1147-1171.
- Lee, T. & Caves, R. 1998. Uncertain outcomes of foreign investment: Determinants of the dispersion of profits after large acquisitions. *Journal of International Business Studies*, 29 (3): 563-582.
- Lewis, K. 1999. Trying to explain home bias in equity holding and consumptions. *Journal of Economic Literature*, 37: 571-608.
- Markides, C. & Ittner, C. 1994. Shareholder benefits from corporate international diversification: Evidence from U.S. international acquisitions. *Journal of International Business Studies*, 2nd quarter: 343-366.
- Merton, R. 1987. A simple model of capital market equilibrium with incomplete information. *Journal of Finance*, 42:483-510.
- Morck, R., & Young, B. 1992. Internalization: An event study test. *Journal of International Economics*, 33: 41-56.
- Morosini, P., Shane, S., & Singh, H. 1998. National culture distance and cross-board acquisitions performance, *Journal of International Business Studies*, 29(1):137-157.
- North, D. 1990. *Institutions, Institutional Change, and Economic Performance*. New York: Cambridge University Press.
- Officer, M. Poulsen, A. & Stegemoller, 2006. Information asymmetry and acquirer return. Working paper. University of Southern California.

- Peng, M. 2003. Institutional transitions and strategic choices. *Academy of Management Review*, 28 (2):275-286.
- Peng, M. & Zhou, J. 2005. How network strategies and institutional transitions evolve in Asia. *Asia Pacific Journal of Management*, 22 (4): 321-336.
- Peng, M. W. 2006. Making M&A fly in China. *Harvard Business Review*, 84(3):26-27.
- Reuer J, & Koza M. 2000. Asymmetric information and joint venture performance: Theory and evidence for domestic and international joint ventures. *Strategic Management Journal*, 21(1):81-88.
- Reuer, J., Shenkar, O., & Ragozzino, R., 2004. Mitigating risk in international mergers and acquisitions: the role of contingent payouts. *Journal of International Business Studies*, 35(1):19-32.
- Rossi, S., & Volpin, P. 2004. Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics*. 74:277-304.
- Shaver, 1998. Accounting for endogeneity when assessing strategy performance: Does entry mode choice affect FDI survival. *Management Science*, 44(4): 571-586.
- Shen, J. and Capron, L. 2006. Acquisitions of private versus public firms: The role of private information on acquirer returns. Working Papers, York University.
- Shimizu, K., Hitt, M., Vaidyanath, D., & Pisano, V. 2004. Theoretical foundations of cross-boarder mergers and acquisitions: a review of current research and recommendations for the future. *Journal of International Management*, 10: 307-353.
- Singh, H., & Montgomery, C. 1987. Corporate acquisition strategies and economic performance. *Strategic Management Journal*, 8(4):377-386.
- UNCTAD Hand Book of Statistics, 2008. By *United Nation Conference on Trade and Development*.
- Travlos, N. 1987. Corporate takeover bids, methods of payment, and bidding firms' stock returns. *Journal of Finance*, 4:943-963.
- Vermeulen, F. & Barkema, H. 2001. Learning through acquisitions. *Academy of Management Journal*, 44(3):457-476.
- Wilson, R. 1967. Competitive bidding with asymmetric information. *Management Science*, 13(11): 816-820.