Cross-Border M&A: Does Culture Matter?

Rajesh Chakrabarti

Narayanan Jayaraman

Swastika Mukherjee

DuPree College of Management,
Georgia Institute of Technology,
800 West Peachtree Street, Atlanta, GA 30332

	Chakrabarti	Jayaraman	Mukherjee
Tel:	(404) 894-5109	(404) 894-4389	(404) 385-2413
E-mail:	rajesh.chakrabarti@mgt.gatech.edu	narayanan.jayaraman@mgt.gatech.edu	swastika.mukherjee@mgt.gatech.edu

Abstract

We study whether cross-border acquisitions between firms from culturally disparate countries perform differently than those between firms from culturally proximate nations. We use the Hofstede measure of cultural dimensions to define cultural distance. Using a sample of close to 400 cross-border acquisitions from 1990s, we find that while cross-border acquisitions are detrimental to the stock return performance of the acquirer in general, acquirers do better when the acquisitions are between countries with greater cultural distance. We use alternative measures of socio-legal and cultural distance and find that in most cases such distance helps improve the stock performance of the acquirer. Linguistic difference, which is highly correlated to the Hofstede cultural distance, actually perform slightly better as an explanatory variable for the post-merger stock performance.

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1. Introduction

The key role that cultural differences play in the success of mergers and acquisitions, particularly in the case of transnational M&A, is well known among practitioners. Pautler (2003), in a survey of recent studies of transnational M&A by consultants, lists managing cultural difference between organizations as central to the success of a deal. In this paper we investigate the effect that differences in national culture have on the performance of transnational acquisitions.

Culture is a relatively new entrant in the finance literature. In a series of papers, La Porta et al (1997, 1999, 2000) have demonstrated the importance of investor protection in the law on ownership, external finance as well as corporate governance. More recently, Stulz and Williamson (2003) argue that the culture of a country, as reflected in its religion and language, have a greater role to play in determining creditor rights than several variables including the origin of its legal system. Our approach is slightly different. Instead of looking at religion and language as proxies for culture, we adopt the measures that are most established in the international business literature – the measures of different dimensions of culture developed by Hofstede in his seminal work in 1980.

We are not aware of any academic research in the finance area probing the effect of culture on the performance of mergers and acquisitions. It is only recently that some researchers in the finance area have begun to use Hofstede measures (see Licht et al 2002a, 2002b) of cultural dimensions. The issue of cultural distance and M&A performance have been studied somewhat in the international business literature with no unanimity on the outcome. There are theories and empirics on both sides of the debate on

whether cultural distance is conducive or detrimental to the post-merger performance of acquiring firms. Many of these studies, however, suffer from methodological limitations.

We study the performance of 420 transnational mergers and acquisitions between 1991 and 2000 involving acquirers from 34 countries and targets from 37 countries. Using an event-study methodology, we study the effect of cultural distance on the stock market performance of the acquiring firms over different horizons extending up to three years after the deal. We use the Hofstede measures to determine "cultural difference" between the different countries involved. We find that while on an average acquirers perform worse than their respective country market indices in the three years following the acquisition, the long term performance of acquirers is positively related to the "cultural distance" between them. In other words, mergers between firms from countries with dissimilar cultures do better than those between firms from countries with similar cultures. Thus we

Transnational mergers have remained a relatively less explored field in finance, though they are increasing in frequency and value over time. The SDC database documents over 1800 international acquisitions in the 1990s. Multi-billion dollar deals like that of Chrysler Daimler have industry effects implications at a global level. Apart from documenting the effect of cultural differences on the success of transnational acquisitions, our paper also contributes to the literature by formally documenting the performance of such transnational acquisitions.

The rest of the paper is organized as follows. Section 2 discusses the related literature. Section 3 describes the data. Section 4 reports the results of three-year post-

merger performance. Section 5 presents some robustness tests. Section 6 provides the conclusion.

2. Related Literature

This paper stands at the confluence of at least two distinct branches of literature – that on mergers and acquisitions, particularly transnational M&As and that on culture, or more specifically the literature on cross-national cultural *differences*. In this section, we briefly review the two branches and describe how the present paper relates to the extant literature.

Cross-national cultural differences – the Hofstede measures

Cross-national differences in culture comprise an important topic in the International Business area. Such differences affect almost every aspect of international business particularly the strategic and organizational aspects. Geert Hofstede in his landmark book on international management, *Culture's Consequences: International Differences in Work Related Values*, divided culture into four dimensions – individualism, power distance, uncertainty avoidance and masculinity – to which a fifth, long term orientation, was later added and developed scores for several countries on these different dimensions. Since then researchers have used the Hofstede measures to calibrate the different dimensions of a society's culture and used the difference in the measures to capture the idea the "cultural distance" in a vast and growing literature in international business.

Kirkman et al (2003) provide an exhaustive survey of the literature that has emerged since the publication of Hofstede's book. Hofstede measures have not been free from criticism and are definitely not exact or perfect measures of culture. However, it is fair to say that they have become the mainstay of "formal" analysis of culture and cross-cultural differences.

Empirical evidence on long-term acquirer returns

Takeovers are one of the most important and increasingly common events in corporate finance. Nearly $4 trillion worth of mergers were done in the US alone between 1998 and 2000 – greater than that in the previous 30 years put together[1]. The value of annual global M&A transactions exceeded $ 2.2 trillion in 1999[2]. Consequently, there is a large body of literature investigating both the short-term stock market performance of the acquirers and targets and the long-term stock market performance of the acquirers – primarily focusing on the U.S. acquirers. In a recent survey article, Bruner (2001) summarizes the findings of 130 studies conducted from 1971 to 2001. The results of the studies that focused on short-term returns suggest that target shareholders earn significant positive abnormal returns and that bidders earn zero risk-adjusted returns. The combined returns of bidders and targets together are positive.

Though the shareholders of the bidding firms earn zero abnormal returns, a wide cross-sectional variation exists among these returns. As Hietala, Kaplan, and Robinson (2000) argue, it is often difficult to interpret the evidence on bidder returns because they would exhibit the combined effect of synergies, the stand-alone value of bidders and

[1] Business Week (2002).
[2] KPMG (1999)

target firms, and the potential overpayment by the bidder. Magenheim and Mueller (1988) find underperformance by the acquiring firms. But, using the same sample with a different methodology, Bradley and Jarrell (1988) do not report any significant underperformance in the three-year period following the acquisitions. Agrawal, Jaffe, and Mandelker (1992), using a methodology that adjusts for firm size and beta, report significant underperformance of acquiring firms for mergers and insignificant performance for tender offers. Loughran and Vijh (1997) report similar results. Franks, Harris, and Titman (1991) find significant underperformance of the acquiring firms in the post-merger period when using equally weighted index, significant positive performance when using value weighted index, and insignificant results when using ten-factor or eight-portfolio benchmarks. Mitchell and Stafford (2000) show significant negative abnormal returns for the acquiring firms in the post-merger period when using the Fama-French three-factor model as the benchmark with all observations equally weighted. However, they report insignificant results when using 25 size and book-to-market reference portfolios or the Fama-French three-factor model with all observations value weighted. It appears that the measurement of the acquiring firms' long-term performance is sensitive to the measurement methodology employed. In summary, the findings of previous studies indicate that acquiring firms earn zero or negative abnormal returns in both the announcement period and the post-merger period. None of these studies focus on a sample of acquirers that acquire foreign targets.

To date, there has been very limited empirical evidence long-term performance of acquirers who acquire firms from a foreign country. A successful integration of the target

firm and the acquiring firm is often key to the success of the combined firm.[3] However, the issue related to integration to a large extent has remained unexplored by studies investigating the post-merger performance of the acquiring firms.

Culture and Cross-border acquisitions

There are two conflicting views in the management literature on the effect of culture on long-term performance of cross-border acquisitions: one arguing for improved long-term performance of cross-border acquisitions and the other arguing for reduced post-acquisition performance due to culture clashes.

The theory in support of enhanced performance argues that the national cultural distance enhances cross-border acquisition performance by providing access to target's and the acquirer's diverse set of routines embedded in national culture (Shane, 1992; Hofstede, 1980; Kogut and Singh, 1988; Barney, 1986). The opposite camp contends that the relatively larger cultural distance between firms tend to unavoidable cultural "collisions" during the post-acquisition period. (Jemison and Sitkin, 1986; Buono et al., 1985)). Jemison and Sitkin (1986) argue that higher level of cultural distance between firms have been associated with a higher degree of conflict during post-acquisition period.

The scanty empirical research in the area is equally divided on this issue. Datta and Puia (1995) analyze completed US cross-border acquisitions between 1978 and 1990 and find that as the overall cultural distance between countries increases, shareholder wealth in those firms making cross-border acquisitions decreases as a result of the

[3] See Kay and Shelton (2000).

acquisition. On the other hand Morosini, Shane and Singh (1998) provide evidence that the national cultural distance enhances cross-border acquisition performance.

Both of these studies, in spite of their contribution to the literature, have some limitations. Datta and Puia (1995) look at windows of up to 30 trading days from the first press report of the cross-border acquisition in the *Wall Street Journal* – an approach that is evidently susceptible with dating errors, and which at best only captures "announcement effects" and not the log-term performance of the acquiring firm. Morosini et al (1998) on the other hand, conduct a survey of 400 companies that engaged in cross-border acquisition activity in Italy between 1987 and 1992. Their usable sample for empirical analysis consists of only 52 observations. As the authors themselves acknowledge, their study suffers from some serious limitations. First, by design their sample consists acquisition in which one of the partners is an Italian firm. The performance proxy used by them is the percentage sales growth for the two years following the acquisition and is not a stock market based performance measure.

The present paper

Our study focuses on the effect of cross-national cultural differences on the long-term stock performance of cross-border acquisitions. We look at over 400 acquisitions with acquirers from 37 countries and targets from 40 countries. Our horizon for stock performance ranges up to three years from the effective date of the acquisition. This study therefore seeks to answer the following question raised in the management literature. Which of the two opposite effects of acquisition involving firms from

culturally disparate countries is stronger – the performance enhancing synergy effect or the dampening integration effect?

3. **Data and Variables**

Our empirical tests are based on a sample of cross-border acquisitions that occurred in the ten-year period 1991 to 2002. The data on acquisitions is obtained from the SDC Platinum Mergers & Acquisitions database. There are well over 1800 cross-border mergers in this period in the SDC database. We use the announcement date of the acquisition in constructing the sample and choose acquirers with public status and deal size over $100 million. The acquirer firms are then matched with available stock market returns data from DataStream. Monthly stock market returns of acquiring firms as well as total market index returns for the country of the acquiring firm are obtained from DataStream. In order to have uniformity across the countries, we use the Datastream market indices. The matching exercise reduces the number of observations to slightly over 1200. Next, in order to avoid contamination of the stock returns in our horizon from multiple events, we drop acquirers conducting multiple cross-border acquisitions within a three-year period. Finally, we exclude observations from Bermuda, Bahamas, British Virgin Islands and Puerto Rico, to avoid including "shell" operations. Our final sample consists of 409 unique acquisitions with 34 different acquirer countries and 37 different target nations from Asia, Europe, North America, South America, Africa and Australia.

The SDC database also provides us with certain important characteristics of the different acquisitions. We note whether the acquisitions were friendly or hostile, whether there was a cash purchase of shares and whether there was a tender offer for shares –

variables that have been identified in prior research as affecting the success of the acquisitions. We construct dummy variables based on these characteristics. We also note if the acquisitions are related or not by comparing the SIC code of the two firms involved, whether they are completely different, equal at the 3-digit level or equal at the 4-digit level.

Our primary measure of cultural distance, the Hofstede measure, is obtained from data available on the ITIM website <http://www.itim.org/4aba.html>. The distances are calculated from the numerical values of the four Hofstede dimension, namely, Individualism (IDV), Uncertainty Avoidance Index (UAI), Power Distance Index (PDI) and Masculinity (MAS). It is computed as follows:

$$\textbf{Hofstede\_distance} = \frac{\sqrt{\sum_{i=1}^{4}(S_{A,i} - S_{T,i})^2}}{4}$$

where $S_{A,i}$ = Acquirer Score on Dimension i ; $S_{T,i}$ = Target Score on Dimension i

Power Distance Index (PDI) focuses on the degree of equality, or inequality, between people in the country's society. **Individualism (IDV)** focuses on the degree the society reinforces individual or collective, achievement and interpersonal relationships. **Masculinity (MAS)** focuses on the degree the society reinforces, or does not reinforce, the traditional masculine work role model of male achievement, control, and power. **Uncertainty Avoidance Index (UAI)** focuses on the level of tolerance for uncertainty and ambiguity within the society i.e., unstructured situations.

We also use three other cultural proxies – Language, Religion and Legal Origin. We follow Stulz & Williamson (2003) for the Language and Religion proxies. The Legal Origin proxy is obtained from La Porta et al (1998). We use the broad categories of

common and civil law in our regression analyses and do not differentiate between French, Scandinavian and German civil law. Dummy variables based on these three characteristics are used to measure the cultural match between the acquirer and the target countries. We assign a value of 1 if the proxies are an exact match and a value of 0 otherwise.

Our main aim is to use these values of cultural proxies, which can be easily measured, to test whether they can explain the variation in long-run performances of cross-border acquisitions as well as robustness checks. We show that some of the cultural proxies have a significant effect on the long-run performance of the acquisitions while other proxies are not significant. We justify the use of Hofstede distance as our primary measure of cultural distance because language, religion and legal origin are all found to be highly correlated with the Hofstede measure.

4. Analysis of post-merger performance

We begin by presenting the chief features of our data. In Table 1 we present a partial country-wise breakdown of the data. Clearly the United States dominates our dataset as the host country with both the most acquiring firms as well as the most target firms. UK is a distant second followed by Canada in both categories. Much of the cross-border M&A activity appears to be restricted to the developed countries with South Africa, Hong Kong and Singapore being the only emerging markets involved. As for the most frequent pairs in our data, the US-Canada and US-UK combinations are the most common ones. While we have excluded multiple cross-border acquirers to arrive at our

sample, this pattern may still be indicative of the distribution of overall cross-border M&A activity in the world.

Table 2 presents a summary of the characteristics of deals covered in our dataset. We note that all but 3% of cross-border acquisitions in our sample are friendly. Cash purchase of shares is the likely method of acquisition in close to two-thirds of the cases while a tender offer is made in only about 20% of cases. While a majority of the acquisitions are related, a large number (about 40%) are unrelated acquisitions. Thus we find considerable variation in the mode of acquisitions as well as the relatedness of the parties involved in the deal. We therefore consider the effects of these variables, in addition to that of "cultural distance" in explaining the long-term post-merger performance of the acquiring firms.

The measure we use to capture the long-run performance of the acquiring firm is the *buy-and-hold abnormal return* (BHAR). Essentially this indicates the excess return over the market that an investor buying the shares of the acquiring company will be enjoying if he made the purchase on the month of the acquisition. Because our focus is on the actual post-merger performance rather than the "announcement effect" on the stock, we construct our windows for event-study analysis beginning from the month of the *effective date* of the merger rather than the announcement date. We look at five different window lengths of 12, 18, 24, 30 and 36 months. The BHAR over a relevant window is then computed in the following manner. The cumulative return over the window is computed by compounding the monthly returns on the acquiring company's stock over the window. The cumulative market return for the country of the acquirer is computed in an analogous way. The difference between the two returns is the BHAR for the acquiring

company over the window. The BHAR methodology is standard in studies of long-term stock performance (see Mitchell and Stafford (2000) for instance). In terms of computing abnormal returns, there are two standard methods – the simple excess of stock returns over market returns and the risk-adjusted abnormal returns. The latter takes into account the beta of the stock in computing the abnormal returns. We use the first method here.

Table 3 presents the summary statistics for the BHARs of the acquiring company over different windows. Since data is not available for every acquiring company for the entire 36-month post-merger period, the number of observations decline as the length of the window increases. One thing that is evident from table 3 is the negative performance of the average acquirer vis-à-vis its country index. The mean BHAR is negative in every single window and starts becoming significantly negative as the time passes – for the 30-month and the 36-month windows. Clearly then cross-border acquisitions do not seem to work out to the advantage of the average acquirer. This is similar to the consensus view of the effect of domestic acquisitions on stock returns for US companies.

In Table 4 panel A, we present the summary statistics for the key explanatory variable of our study, the Hofstede measure of cultural distance. Table 4 panel B shows the five country pairs with maximum similarity in culture and the five pairs with most dissimilar cultures.

In Table 5, we present the results of our first regression. The dependent variables are the BHARs of acquiring companies over different event-windows. The independent variables are the various deal characteristics as well as the Hofstede measure of cultural distance. As the regressions show, the only variable that turns out to be significant in the regression is the Hofstede cultural distance. Also it is *positively* significant, indicating

that as cultural distance increases, so does the BHAR of the acquiring firm. Also the effect of cultural distance becomes uniformly more pronounced and significant with the passage of time, suggesting that this effect is coming from actual operational effects of the combined firm rather than any anticipatory stock market reaction.

Another notable feature of these regressions is the increase in the R^2 with increase in window length. Clearly, in the short horizon after the event, there is a lot of dispersion on the stock price effects and the explanatory variables do not explain much of this rather random dispersion. As time passes however, the overall negative effect of the acquisition as well as the positive effect of Hofstede's cultural distance measure becomes more pronounced (all the regressions are significant at 5% level). We see this in the negative significance of the intercept term and the positive significance of the cultural distance variable. We also note that the "cash" dummy is significant in the short and medium run, i.e. up to two years but its effects disappear in the longer term.

Next we look at the performance of US firms making cross-border acquisitions. As over a third of our total sample falls in this category, it is important to ascertain their performance separately. Table 6 shows the regression results for this sub-sample. The Hofstede measure is once again significantly positive, particularly in the long run. Clearly then, US acquisitions too work well when the targets are from lands whose culture is different from American culture. As before cash purchases appear to do better in the short to medium term.

In view of the fact that the financial press is often agog with corporate culture clash ruining mergers (e.g. Daimler Chrysler and AOL Time Warner), our finding that companies from countries with disparate cultures actually lead to better mergers, is

perhaps a bit intriguing. However, as we mentioned earlier, this opposite possibility has also been theorized in the international business literature. As Morosini et al (1998) point out, the acquisition of diversified "routines and repertoires" helps a company functioning in the global marketplace. Cultural distance enhances the difference of the "routines and repertoires" embedded in the target firm from that of the acquiring company and thus helps the combined entity to perform better. Of course, this benefit has to be measured against the possible "collision" effects of firms from completely different cultures in the post-merger integration process. Our results suggest that in the cross-border M & A setting, the former effect seems to outweigh the latter risk.

A caveat in interpreting these results is in place here. We would like to draw a distinction between national culture and corporate culture in this context. It is quite possible that two firms from the same country may have very different *corporate* cultures providing them with benefits and challenges in a merger. National cultures are likely to influence corporate cultures but the two remain distinct notions. It is quite possible that while the benefits of having varied "routines and repertoires" may be limited in a domestic merger, differences in corporate cultures may actually make the union unviable in the integration process. Our results therefore should not be interpreted as an unqualified "different is compatible" recommendation.

5. Alternative measures of socio-legal distance and performance

The Hofstede measure of cultural distance that we use in our analysis is one of several measures of the degree of dissonance between socio-legal characteristics of different countries. Other recent studies in finance (Stulz and Williamson (2003)) have

used differences in religion and language to capture cultural differences while La Porta et al (1998, 1999, 2000) have used origin of legal system as another important feature that determines the financial structure in the country. We study the relationship between the different measures of socio-legal differences in table 7. Our dummy variables for religion, language and legal origin take the value 0 when two countries have the same feature and 1 when they are different. As table 7 shows, the Hofstede measures are highly correlated with the religion and legal origin variables suggesting that the differences in the different aspects go together.

It is difficult to establish which of these alternative measures explain post-merger success in cross-border M&As. However, we conduct a simple "horse-race" of the four alternative measures in Table 8. Here we use one measure at a time in a regression with the other variables in our previous regressions in the four different models. It turns out that the language dummy performs even better than the Hofstede measure, which dominates the other two in explaining the variation on the three year buy and hold returns for firms making international acquisitions. While these regressions do not prove the superiority of one measure over another in capturing socio-legal differences that affect finance in general (clearly the results disagree with Stulz and Williamson (2003) for one thing), they do provide preliminary indication that lingual differences and cultural differences make for the best recipes of success in the case of cross-border M&As.

Finally we investigate if the culture effects that we detected using buy-and-hold returns are robust to an alternative measurement of performance – the cumulative abnormal returns (CAR). The CARs are computed as the sum of monthly abnormal returns of the acquiring firms over the returns on the relevant national index. Thus the

chief difference between BHARs and CARs comes from compounding. BHARs take into account the compounding while CARs do not. While BHARs are more frequently used in long-term studies, CARs are also used quite often in event studies. Table 9 shows the regression results with the CARs for different horizons as the dependent variables. Qualitatively, these results are indistinguishable from those in Table 5. Thus our results are robust to the specification of the performance metric.

6. Conclusion

Several recent papers have underlined the influence of culture on finance. Stulz and Williamson (2003) have demonstrated the effect of national culture on protection of creditor rights, which in turn determine the nature of financial markets around the world. We investigate the effect of culture on finance in a more restricted setting, a situation when two cultures meet – that of a merger or acquisition. Analyzing the long-term post-merger stock performance of over 400 cross-border acquisitions in the 90's and using the measures of cultural distance developed by Geert Hofstede and used widely in the international business literature, we find that while cross-border acquisitions *in general* have been detrimental to the acquirer's stock prices in the long-run, companies coming from countries with greater disparity in culture have actually done better in a merger than those from countries that are culturally more akin to one another.

While differences in culture may lead to problems in post-merger integration, mergers between firms from culturally disparate countries arm the acquirer with a diverse set of "routines and repertoires" that help in their functioning in the global marketplace. This effect appears to be stronger than integration problems stemming from

cultural differences. It is also possible that for mergers between firms from completely different cultures may lead to lesser integration problems since the target firm may be allowed to function with greater autonomy.

Clearly the effects of culture on finance and even cross-border M&A are multi-faceted. The channels through which they enter the M&A, the exact nature of the diversity of routines and strategies and how they help the acquirer's performance, as well as the challenges cultural dissonance pose in the integration process are all important questions in corporate finance. The relationship between corporate cultures and national cultures is also an area that needs further investigation. We leave the exploration of these topics to future research.

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Table1: Country-wise breakdown of our sample

Panel A: Major acquiring and target countries

Acquiring countries	No. of acquisitions	Target countries	No. of acquisitions
United States	144	United States	116
United Kingdom	72	United Kingdom	52
Canada	30	Canada	42
France	23	Germany	27
Japan	17	France	25
Germany	13	Netherlands	17
Switzerland	10	Australia	13
Netherlands	10	Sweden	11
Australia	10	Italy	10
Hong Kong	7	Switzerland	8
Finland	7	Norway	8
Sweden	6	Israel	7
South Africa	6	Denmark	7
Singapore	5	Spain	6
Italy	5	New Zealand	6
Others	44	Hong Kong	6
		Finland	5
		Others	43

Panel B: A few common pairs

		Target Country				
		USA	Canada	UK	Germany	France
Acquiring Country	USA		35	34	15	12
	UK	35				
	Canada	18				
	France	11				
	Japan	10				

Table 2: Summary description of data

Cash vs. Non-cash, Friendly vs. Hostile, Tender Offer vs. Non-tender offer, Unrelated vs. Related (matched with 3-digit SIC code, or 4-digitSIC code) are the characteristics we use to categorize the acquisitions.

	Number	Percent
Total number of acquisitions	409	100
Cash	254	62
Non-cash	154	38
Friendly	397	97
Hostile	12	3
Tender offer	82	20
No tender offer	327	80
Unrelated	165	40
Related at 3-digit SIC level	181	44
Related at 4-digit SIC level	63	15

Table 3: Summary statistics for the Buy-and-Hold Abnormal Returns (BHAR)

BHAR12, BHAR18, BHAR30, BHAR36 are the Buy-and-Hold Abnormal Returns for twelve, eighteen, twenty-four, thirty and thirty-six months respectively

	BHAR12	BHAR18	BHAR24	BHAR30	BHAR36
Observations	399	359	296	243	201
Mean	-0.05	-0.05	-0.10	-0.14	-0.20
t-stat for Mean	-1.88	-1.09	-1.74	-1.98	-2.77
Median	-0.08	-0.14	-0.24	-0.30	-0.32
Maximum	3.05	5.00	6.17	7.37	3.88
Minimum	-1.15	-1.89	-3.10	-2.12	-3.58
Std. Dev.	0.52	0.79	1.00	1.08	1.01
Skewness	1.14	2.21	2.87	2.79	0.95
Kurtosis	7.26	12.07	17.58	16.85	6.01
Jarque-Bera statistic (test of normality)	388.59	1523.24	3028.17	2258.79	105.85
Probability	0.00	0.00	0.00	0.00	0.00

Table 4 : Hofstede measure of Cultural Distance

Panel A: Summary Statistics

HOFSTEDE DISTANCE	
Observations: 404	
Mean	38.70908
Median	31.60696
Maximum	98.82307
Minimum	6.557439
Std. Dev.	23.79025
Skewness	0.448000
Kurtosis	1.956646
Jarque-Bera	31.83864
Probability	0.000000

Panel B: Country pairs with maximum and minimum cultural distance

Five country pairs with most similar cultures	
Australia	United States
Germany	Switzerland
United Kingdom	United States
Australia	Canada
Belgium	France

Five country pairs with most dissimilar cultures	
New Zealand	Malaysia
Netherlands	Japan
Australia	Malaysia
United States	Greece
Chile	United States

Table 5: Buy-and-Hold Abnormal Returns and their determinants

The dependent variable in this OLS regression are the Buy-and-Hold Abnormal Returns (BHARs) calculated for different event windows of 12, 18, 30 and 36 months. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes value of 1 when the acquisition is friendly, as described in SDC Platinum database, and value of 0 otherwise. HOFSTEDE_DIST is the cultural distance between two nations, as measured by the Cartesian distance between the different cultural dimensions for the two nations. RELATEDNESS is a dummy variable with value 1 when the acquirer and target belong to related industries as matched by their 3-digit SIC codes, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise.

	BHAR12	**BHAR18**	**BHAR24**	**BHAR30**	**BHAR36**
INTERCEPT	0.05	-0.22	-0.39	**-1.06**	**-0.95**
	0.30	*-0.84*	*-1.13*	*-2.75*	*-2.31*
CASH_DUMMY	**0.12**	**0.23**	**0.26**	0.27	0.22
	2.21	*2.63*	*2.11*	*1.79*	*1.52*
FRIENDLY_DUMMY	-0.25	-0.16	-0.20	0.33	0.20
	-1.59	*-0.66*	*-0.62*	*0.91*	*0.48*
HOFSTEDE_DIST	0.00	0.00	**0.01**	**0.01**	**0.01**
	0.67	*1.57*	*2.36*	*3.18*	*3.61*
RELATEDNESS	0.06	0.10	0.10	0.11	0.09
	1.63	*1.68*	*1.24*	*1.21*	*0.94*
TENDER_DUMMY	0.00	0.00	0.04	-0.05	-0.13
	0.01	*-0.02*	*0.28*	*-0.28*	*-0.75*

Mean of dependent variable	-0.048	-0.041	-0.092	-0.128	-0.178
R-squared	0.027	0.037	0.044	0.070	0.088
Number of observations	392	353	293	240	198

Table 6: Performance of US acquisitions

The dependent variable in this OLS regression are the Buy-and-Hold Abnormal Returns (BHARs) calculated for different event windows of 12, 18, 24, 30 and 36 months. The BHAR is the average BHAR across all US acquirers. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes value of 1 when the acquisition is friendly, as described in SDC Platinum database, and value of 0 otherwise. HOFSTEDE_DIST is the cultural distance between United States and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. RELATEDNESS is a dummy variable with value 1 when the acquirer and target belong to related industries as matched by their 3-digit SIC codes, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise.

	BHAR12	**BHAR18**	**BHAR24**	**BHAR30**	**BHAR36**
INTERCEPT	-0.271	-0.443	-1.012	-1.328	-1.358
CASH_DUMMY	0.241*	0.466*	0.550*	0.680*	0.524
FRIENDLY_DUMMY	-0.075	-0.043	0.277	0.151	0.090
HOFSTEDE_DIST	0.000	0.003	0.010*	0.018**	0.019**
RELATEDNESS	0.050	0.061	0.054	0.177	0.210
TENDER_DUMMY	-0.039	-0.197	-0.276	-0.452	-0.378
Mean of BHAR	-0.148	-0.069	-0.030	-0.065	-0.228
R-squared	0.055	0.069	0.100	0.172	0.194
Number of observations	140	131	116	96	82

* Significant at 5% level
**Significant at 1% level

Table 7: Correlation matrix of different measures of cultural distance

HOFSTEDE_DIST is the cultural distance between two nations, as measured by the Cartesian distance between the different cultural dimensions for the two nations. LANGUAGE_DUMMY is a dummy variable with value 1 when the two nations have the same primary language, and 0 otherwise. LEGAL_DUMMY is a dummy variable with value 1 when the two nations share the same legal origin, and 0 otherwise. RELIGION_DUMMY is a dummy variable with value 1 when the countries share the same primary religion, and value 0 otherwise.

	LANGUAGE_DUMMY	LEGAL_DUMMY	RELIGION_DUMMY
HOFSTEDE_DIST	0.79	0.51	0.38
LANGUAGE_DUMMY		0.69	0.23
LEGAL_DUMMY			0.17

Table 8: Regressions with different measures of socio-legal difference

The dependent variable in this OLS regression are the Buy-and-Hold Abnormal Return for 36 months following the effective date of the acquisition. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes value of 1 when the acquisition is friendly, as described in SDC Platinum database, and value of 0 otherwise. HOFSTEDE_DIST is the cultural distance between United States and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. RELATEDNESS is a dummy variable with value 1 when the acquirer and target belong to related industries as matched by their 3-digit SIC codes, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. LANGUAGE_DUMMY is a dummy variable with value 0 when the two nations have the same primary language, and 1 otherwise. LEGAL_DUMMY is a dummy variable with value 0 when the two nations share the same legal origin, and 1 otherwise. RELIGION_DUMMY is a dummy variable with value 0 when the countries share the same primary religion, and value 1 otherwise.

Dependent variable: BHAR36

	Model 1	**Model 2**	**Model 3**	**Model 4**
INTERCEPT	-0.933*	-0.817*	-0.731	-0.954*
CASH_DUMMY	0.242	0.283	0.264	0.224
FRIENDLY_DUMMY	0.206	0.246	0.365	0.198
LANGUAGE_DUMMY	0.588**			
LEGAL_DUMMY		0.407**		
RELIGION_DUMMY			0.012	
HOFSTEDE_DIST				0.010**
RELATEDNESS	0.085	0.069	0.058	0.091
TENDER_DUMMY	-0.130	-0.138	-0.159	-0.130
R-squared	0.110	0.068	0.026	0.088
N	196	193	198	198

* Significant at 5% level
**Significant at 1% level

Table 9: Regression results with CAR as the measure of performance

The dependent variable in this OLS regression are the Cumulative Abnormal Returns (CARs) calculated for different event windows of 12, 18, 24, 30 and 36 months. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes value of 1 when the acquisition is friendly, as described in SDC Platinum database, and value of 0 otherwise. HOFSTEDE_DIST is the cultural distance between two nations, as measured by the Cartesian distance between the different cultural dimensions for the two nations. RELATEDNESS is a dummy variable with value 1 when the acquirer and target belong to related industries as matched by their 3-digit SIC codes, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise.

	CAR12	CAR18	CAR24	CAR30	CAR36
INTERCEPT	-0.049	0.560	-0.567*	-0.760*	-0.365
CASH_DUMMY	0.152*	-1.473	0.282**	0.219	0.096
FRIENDLY_DUMMY	-0.200	-0.044	-0.047	0.145	-0.075
HOFSTEDE_DIST	0.001	0.039	0.004*	0.005*	0.006*
RELATEDNESS	0.067	-0.718	0.103	0.136	0.107
TENDER_DUMMY	0.013	-0.312	0.019	-0.020	-0.151
Mean	-0.068	0.491	-0.168	-0.160	-0.109
R-squared	0.024	0.014	0.051	0.052	0.040
N	393	354	293	240	197

* Significant at 5% level
**Significant at 1% level