Valuation effects of cultural disparity on cross border mergers: The evidence from India

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Abstract
The object of this study is to explore the effect of cultural distance on both the long run and short run performance of cross border mergers and acquisitions undertaken by Indian acquiring firms. We utilize buy and hold returns (BHAR), cumulative abnormal returns (CAR) and cross-sectional regression analysis in our study. Adopting the traditional Hofstede measure of cultural distance and other pertinent variables, commonly used to measure cultural differences, we document a negative and statistically significant influence of cultural distance on Indian cross-border M&As and corroborate some of other findings reported in prior research. Also, we find that the BHAR is nevertheless higher when the acquisitions are friendly, paid for 100% cash, and the acquiring firm is large, older and belongs to a business group. The inclusion of the variable ‘business group’ along with industry relatedness and acquirer size provides valuable insights into the Indian cross border acquisition landscape, wherein business groups dominate to a great extent.

Key Words: Valuation; Cross Border Mergers; Cultural Disparities; Indian Acquirers

JEL Classifications: F15; G32; G34


Introduction

Studies on cross-border acquisitions undertaken by acquirers in the two major emerging market economies of China and India (Aybar & Ficici, 2009; Bhagat, Malhotra & Zhu, 2011; Boateng, Wang & Yang, 2008; Chen and Young, 2010; Gubbi, Aulakh, Ray, Sarkar & Chittoor, 2010; Nicholson and Salaber, 2013; Ning, Kuo, Strange & Wang, 2014; Li, Li and Wang, 2016) report the abnormal returns around the announcement of mergers, can be either positive, zero and insignificant or negative. This is not an unexpected result. These positive or negative returns from these cross-border mergers depend not only on the choice of target firms but also on a host of other factors, both tangible and intangible.

In a recent issue of The Economist (June 10-16, 2017, page 69), it has been reported that even though the smaller acquirers in China have done relatively well, the larger acquirers have been constrained by the State authorities and their own inability to assess and implement the necessary integrative strategies in foreign target nations. In particular, the subpar performance of the larger acquirers as often reported by the financial press may be particularly affected by the cultural distance between the acquiring firms and target firms, especially in developed nations. Cultural distance between acquirers and targets has been explored in the context of transnational mergers and acquisitions (M&A) as a critical variable that can have significant bearing on the eventual success of such cross-border corporate integrations (Datta and Puia, 1995; Lee et al., 2008; Leung et al. 2005; Shenkar, 2012); culture affects the information flow and the learning process, each so vital for the success of cross-border mergers (Datta and Puia, 1995; Morosini et al., 1998).

The object of this study is to explore in particular the effect of cultural distance on both the long run and short run performance of cross border mergers and acquisitions undertaken by Indian acquiring firms. We explore in this paper specifically the effect of cultural distance on both long run buy and hold returns and on announcement period returns to Indian cross border acquisitions. We examine the influence of several measures that codify the cultural distance between acquiring and target firms beyond the Hofstede (1980) measure to embody cross country differences in culture.

We analyze a sample of 141 cross-border acquisitions undertaken by Indian firms between 1995 and 2015. As far as we know, this is first time this particular issue with regard to cross border mergers and acquisitions undertaken by Indian firms has been empirically explored in the finance literature.

We find that long run buy and hold returns (BHAR) for various time periods are negative even though the announcement period abnormal returns for selected windows are either positive or zero for our sample of firms. BHAR is nevertheless higher when the acquisitions are friendly, paid for 100% cash, and the acquiring firm is large, older and belongs to a business group. The Hofstede measure turns out to be negative and statistically significant at the 1 percent level in our study. The results are more in line with those reported by Ahern et al., (2015) and opposite to those reported by Chakrabarti et al., (2009). Returns to acquiring firms are lower when the cultural distance between the acquiring and target firms is greater. However, we are able to document and corroborate patterns of influence on the long-term performance of Indian cross-border mergers and acquisitions that have been earlier reported by Ahern et al., (2015) for a global sample of acquiring firms.

Rest of the paper is organized as follows. Section 2 explores the links between cultural distance and firm performance and develops the hypotheses for the study. Data, variables and methodology used for the study are described in Section 3. The results for the study are presented in Section 4. Section 5 concludes.

Literature Review

Culture and its effects on cross-border M&A performance

Culture, according to Hofstede et al., (2010), “consists of unwritten rules of the social game. It is the collective programming of the mind that distinguishes the members of one group or category of people from others.” Further they show that national culture explains the differences in manager’s attitude and value system. Evans et al., (2002) show that managers are more sensitive to cultural issues for international acquisition as compared to domestic acquisition. Morosini and Singh (1994) conjecture that the acquirer would choose the most appropriate post-acquisition integration strategy if the firm knows how the national culture would
influence the target. Weber et al. (1996) show that critical factor for the success of international M&A is the difference in national culture rather than the corporate culture. Zhao et al., (2004) theorize the role of culture in determining the transaction costs associated with cross-border mergers. Slagel (2006) posit that the cultural distance works as a boon (a bane) if the level of integration between acquirer and the target is low (high). Hence, even though a large body of evidence indicates that cultural distance increases the cost of integration and negatively affects firm performance, cultural distance may, under certain scenarios, also enhance the potential synergies through capability building and resource sharing (Mayrhofer, 2004).

Though wider gaps in culture, either national or corporate, between the acquiring and target firms is often attributed to as one of the primary reasons for which cross border acquisition usually fail (Datta & Puia, 1995; Stahl & Voigt, 2008), there is a countervailing argument which posits that when such wide gaps do exist, acquiring firms undertake the strictest of due diligence before they embark upon such cross border acquisitions and the extra care they undertake before extending offers for targets often leads to superior outcomes after the acquisitions (Morosini & Singh, 1994). Culturally distant mergers can often lead to innovation and learning in an environment where participants, faced with uncertainties, are prepared to break new grounds (Very, Lubatkin & Calori, 1996). The awareness of the cultural distance often motivates the participants to enforce better integration measures that results in superior post-merger performance (Goulet & Schweiger, 2006). Thus, larger distances between the cultures of acquiring and target firms in the context of cross border M&As need not necessarily lead to negative outcomes for the participating firms; they can drive positive post-merger outcomes as well.

Even though empirical research on cross border mergers has been extensive, comprehensive studies examining the effect of cultural differences on the post-merger performance of acquiring firms in the context of cross border mergers and acquisitions have been relatively few. Ahern et al. (2015) examine a global sample of 827 acquiring firms for the period 1985 through 2008 from 35 different countries that have engaged in cross border M&A acquiring targets in 38 countries, and have reported that the volume of cross border mergers and the combined announcement returns to both the acquiring and target firms are lower when the countries involved in the M&A are culturally more distant. Ahammad et al. (2016) have also reported that cultural differences have a negative influence on cross-border acquisitions.

On the other hand, Chakrabarti et al. (2009), using a global sample of over 800 acquisitions during the period 1991-2004 have reported that cross border acquisitions undertaken by firms across a wide spectrum of nations performed relatively better when the culture of the acquiring firm differed markedly from that of the target firms. Contrary to normal expectations, they find a positive relation between cultural distance and long run post-merger M&A performance. Using a survey methodology, Morosini et al. (1998), also find a positive relation between cultural distance and post-merger performance for a sample of 52 cross border acquisitions undertaken between 1987 and 1992. Dikova and Sahib (2013) have reported for a 2009-10 global sample of firms that more internationally experienced acquirers are able to better manage cultural differences in cross-border acquisitions. Lack of experience in culturally distant cross border acquisitions initiated by novice acquirers can thus lead to lower post-merger performance.

**Cultural distance and its effects on Indian acquiring firms**

The Indian firms are new in the realm of cross border mergers and that several acquiring firms in India are dominated by insiders makes the study of the effect of cultural distance on the performance of cross border merger distinctly unique. In India, insiders are called promoters and they are either an individual or groups of individuals. Relatives of the promoter and other associates form the promoter group. Promoter is a person who brings about the incorporation and organization of a corporation and retains the overall control of the company. Indian promoters have dominated the corporate sector ever since India became a sovereign nation in 1947 and continue to hold, on average, the largest share blocks in the companies they own and control.

On the other hand, firms are predominantly owned by insiders in India and are therefore expected to be very conservative in their approach to foreign acquisitions. They are also likely to tightly integrate the target into their own firms once they do engage in cross border acquisitions. Indian corporate insiders, who normally would prefer to engage in domestic mergers, would be more cautious in venturing into cross border mergers
but once they do commit to a cross border merger they would be expected to channel more focused attention and higher amounts of resources to make the cross border mergers work. Cultural distance between acquirers and targets might motivate the involved firms to commit to a greater degree of commitment to make the post-merger integration process work.

Also, India being a diverse country in terms of culture, firms in India are accustomed to a degree of internal corporate cultural distance in terms of their domestic operations. Unlike the United States, operating working cultures of different states in India vary appreciably but there is uniformity in the ways national culture influences corporate values in India. Even though there is some homogeneity in terms of national culture in India, corporate culture varies between the states substantially; managers are exposed and are acutely sensitive to variations in local cultures in India. So, whether the evidence pertaining to the effects of culture on merger valuations with regard to Indian acquiring firms will align itself with those reported by Ahern et al., (2015) or with those documented by Chakrabarti et al., (2009) is an empirical issue. Also, both Ahern et al. (2015) and Chakrabarti et al (2009) have looked into samples where the acquirers belong predominantly to the developed nations with higher per capita GDP as compared to their targets. In our case we try to explore whether cultural distance plays a similar role when acquiring firms from a lower per capita GDP country like India acquire targets in nations with higher per capita GDP.

Empirical evidence on cross-border M&A undertaken by Indian firms and the economic rationale for cross-border M&A.

The valuation effects of cross border mergers around the announcement of mergers undertaken by Indian acquirers have been examined in the financial literature (Gubbi et al. 2010; Kohli & Mann, 2011; Pradhan & Abraham, 2005; Chakrabarti, 2008; Zhu & Malhotra, 2008). On average, the announcement period returns to Indian acquirers in the context of cross-border mergers are positive. Recently, Indian acquiring firms have aggressively resorted to cross border acquisitions in order to internationalize their respective operations (Sun et al., 2012), and often these acquiring firms have ventured into unchartered territories wherein the culture of the target firms varied widely - either at the firm level or at the national level - from their own. Prior research (reviewed in Banerjee et al., 2014) finds that Indian firms do relatively well, in generating value for their shareholders, upon acquiring domestic firms. Indian acquirers realized, on average, positive returns for their shareholders. This evidence stands in stark contrast with existing research on profitability of acquisitions by firms in developed nations (Moeller et al., 2004) and of cross border acquisitions by firms in developed nations (Moeller & Schlingemann, 2005, and Cakici et al., 1996); the results consistently show that acquiring firms post either negative or zero abnormal returns around the announcement of mergers. Therefore, at first sight it is puzzling that Indian acquirers make profitable acquisitions while their Western counterparts do not.

Hypotheses for the study

Our study examines three research questions. First, whether the acquirers from an emerging economy like India can create long-term value for their shareholders through cross border M&A. Second, whether the cultural distance between India and the target nations can play any significant, discriminating role in the value creation. Third, whether the absorptive capacity of the Indian acquiring firms has any role to play in influencing the relationship between value created in cross-border mergers and the cultural distance between acquirers and targets. Absorptive capacity refers to identification of new information and taking such information into consideration in order to make commercial gains (Zahar and George, 2002; Tzokas et al. 2015). Emerging economy firms are in the early stage of their internationalization process and may not be able to manage the complex strategic assets acquired through cross-border mergers. Therefore, they need to build the absorptive capability to overcome this shortcoming and become successful in cross-border acquisitions. We utilize three firm specific variables to proxy for the absorptive capacity of Indian acquirers: (a) size of the acquiring firms; (b) industry relatedness; (c) whether the acquiring firms belong to a business group in India.

H1: The long-term buy and hold returns to Indian acquiring firms from cross-border mergers will be positive.

Cultural distance is a measure of difference of culture of two countries and the genesis of this difference could be from different sources like history, geographical climate, religion and language (Raid and Vaara, 2011). Like Chakrabarti et al., (2009), we utilize the Hofstede measure to differentiate the cultural difference...
between two nations. The Hofstede cultural dimension is a quantitative construct based on five attributes: power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity considerations and long-term-short-term orientation. Researchers have also adapted other measures to gauge the cultural distance. The GLOBE project (Global Leadership and organizational Behavior Effectiveness) database has also been used by scholars to measure cultural distance. As far as acceptability is concerned, the Hofstede measure is widely used in different streams of management studies (Spector et al., 2001; Sivakumar and Nakata, 2001, Kirkman et al., 2006; Chakrabarti et al., 2009). Culture theorists propose that cultural difference matter in international business; it negatively affects the post-acquisition integration process (Reuer and Koza, 2000), and this can result in a negative impact on value creation for acquiring firms in the context of cross-border mergers (Hofstede et al. 2010, p.408-409). So, we expect cultural distance to affect long-term buy and hold returns negatively.

H2: The greater the cultural distance between India and a target firm’s country, the lower will be the long run buy and hold returns to Indian acquiring firms.

Some firm specific characteristics may mitigate the negative impact of cultural distance. Usually, larger firms have more resources in terms of financial and personnel which they can use for better adaptive purpose (training and development). Li et al. (2016) find that the larger firms are less affected by the cultural distance. Size of the acquirer can have a negative relationship with the returns to cross-border acquisition announcements (Bertrand and Bestchinger, 2012), the effect being attributed to hubris on the part of acquiring firm mangers (Roll, 1986).

Nevertheless, we expect the size of the Indian acquirers to have a mitigating effect on the negative impact of cultural distance.

H3A: The negative impact of cultural distance on long run buy and hold returns to Indian acquirers from cross-border mergers will be lesser for larger acquiring firms

Acquiring target firms in related industries entail lower cost of integration as there would be potentially higher cultural, technological and strategic alliance between the acquiring firms and the targets. The firms from emerging markets try to find the horizontal acquisitions to achieve larger benefits through accessing the complementary assets (Athreye and Godley, 2009). Li et al., (2016) have also found that the acquisitions in related industries are found to be less affected by the cultural distance. This implicitly implies the importance and applicability of learning and absorptive capacity.

In the case of unrelated acquisitions, this cultural distance promotes the scope for developing knowledge, new experimentation in terms of new markets, new products and new resources (Gavetti and Levinthal, 2000), such unrelated expansions nevertheless increase risk and the probability of failure (Pennings et al., 1994). So, when Indian acquiring firms acquire targets in related industries, we expect the negative effects of cultural distance to be lesser.

H3B: The negative impact of cultural distance on long run buy and hold returns to Indian acquirers from cross-border mergers will be lesser for firms acquiring targets in related industries

Ownership structure plays a very important role in governance mechanisms of firms; it influences strategic decision making and shareholder’s value creation. (Jensen and Meckling, 1976). Chari et al., (2010) show that the ownership structure has a role in absorptive capability and firms with superior ownership advantages have higher prospect for value creation when they undertake cross-border acquisitions.

Concentrated ownership structure is quite common among the firms in emerging markets. Even though effective legal protection and external governance is very week in such firms (La Porta et al. 1997, Masulis et al. 2007), concentrated shareholdings may in fact reduce the extent of managerial discretion (Dharwadkar et al. 2000). Controlling shareholders have an incentive to monitor managers, collect information and take the risk of pursuing aggressively new ventures through cross-border acquisitions. (La Porta et al. 1999).

In India, the concentrated ownership is prevalent in the form of business groups. Khanna and Rivkin (2006) define a business group as “a set of firms which, though legally independent, are bound together by a constellation of formal and informal ties and are accustomed to taking coordinated action.” The resource-
based view of the firm attempts to link business group with group specific resources (Chang and Hong, 2000). Gubbi et al. (2010) show that business group can create their own internal markets and can substitute their financial, technological and personnel resource deficiencies through intra group training program, reallocating funds and technologies. As a result, they may overcome the institutional emptiness by creating their own internal system (Almeida and Wolfenzon, 2006; Khanna and Palepu, 2010). This availability of internal resources provides them with superior access and makes them more capable of capacity creation and being internationally competitive.

Beule and Sels (2016) find that Indian business group firms have positive impact on shareholder’s value in case of cross-border acquisitions. As such we would expect that the negative effect of cultural distance on long run buy and hold returns to cross-border acquisitions will be less when the acquiring firm belongs to a business group in India.

H3C: The negative impact of cultural distance on long run buy and hold returns to Indian acquirers from cross-border mergers will be lesser for acquiring firms belonging to a business group

Methodology, Data and Variables

Methodology & Data

A research methodology very similar to that of Chakrabarti et al. (2009) is adopted but we extend their approach by including additional explanatory variables obtained from the World Bank database and Kurtzman, Yago & Phumiwasana, (2004). The influence of business group on firm performance and decision making is an important issue for Indian firms. These groups of firms are linked with common bank, interlocking directorships and cross holdings of equity (Khanna and Rivkin, 2006). Since, Indian business groups are generally known to be more concerned about power and control than creating value (Manos et al., 2007), the influence of the variable ‘business group’ along with industry relatedness and acquirer size are also explored in this study. The long-term equity performance of companies is measured by the annualized buy-and-hold-return (BAHR) and short-term performance is measured using cumulative abnormal returns (CAR). CARs are determined using standard event study approach. We employ cross-sectional regression model in our analysis.

The original sample of cross-border mergers and acquisitions undertaken by Indian acquirers between 1995 and 2015 was compiled from the Thomson One Mergers and Acquisition database.

The following screening criteria was applied to the original sample.

a) The acquisitions had to be completed.
b) The acquiring firm was of Indian origin and the target was foreign whose country of origin was known.
c) After the transaction, the acquiring firm owned at least 25% stake in the target firms.
d) The acquiring firm was a publicly traded firm for which returns data were available on the Prowess database resulting in 431 observations.

We obtain monthly returns data from the Prowess database for the Indian acquiring firms and calibrate as month zero the month in which the cross-border acquisition is announced. To remove the possibility of confounding effects in the returns data, we exclude, as in Chakrabarti et al. (2009), acquirers which undertook multiple cross-border acquisitions within a three-year period resulting in 395 observations. Finally, we screen out all the firms for which the market value information was unavailable resulting in 214 observations. Finally, we screen out the firms for which rest of the variables information was not available resulting in the final sample of 141 observations.
| Target Nations | No. of Acquisitions |
|---------------|---------------------|
| Australia     | 2                   |
| Belgium       | 2                   |
| Denmark       | 2                   |
| Egypt         | 2                   |
| Germany       | 11                  |
| Hong Kong     | 1                   |
| Indonesia     | 5                   |
| Israel        | 2                   |
| Italy         | 4                   |
| Malaysia      | 3                   |
| Portugal      | 1                   |
| Singapore     | 9                   |
| South Africa  | 5                   |
| South Korea   | 2                   |
| Spain         | 3                   |
| Sweden        | 3                   |
| Switzerland   | 2                   |
| Thailand      | 4                   |
| United Kingdom| 31                  |
| United States | 47                  |
| **Total**     | **141**             |

**Variables**

Five categories of variables are included in this study: Firm and deal specific characteristics, country level characteristics, the Hofstede measure, variables related to Opacity premium (discount), and the Ease of doing business variables. We describe the variables in Appendix I.

We estimate (but do not report explicitly) variance inflation factors (VIF) for all the variables of interest in all the tests conducted in this paper and find that multi-collinearity is not a potential concern. The maximum value of VIF for any variable in any of these tests is 4.25.

**Empirical Results and Discussion**

Table 1 presents the distribution of target firm nations for the 141 cross-border acquisitions. Target firms are predominantly located in developed nations. Nevertheless, despite being relatively new to the cross-border acquisitions realm, Indian firms have spread themselves well in terms of buying assets in both developed and developing economies of the world. The large number of acquisitions in the United States can be explained by the fact that primarily Indian information technology firms acquired targets in the United States.
Table 2: Annual Distribution of acquisitions

| Year | No. of Acquisitions |
|------|---------------------|
| 1995 | 4                   |
| 1996 | 0                   |
| 1997 | 0                   |
| 1998 | 1                   |
| 1999 | 3                   |
| 2000 | 8                   |
| 2001 | 5                   |
| 2002 | 3                   |
| 2003 | 9                   |
| 2004 | 11                  |
| 2005 | 16                  |
| 2006 | 19                  |
| 2007 | 21                  |
| 2008 | 10                  |
| 2009 | 4                   |
| 2010 | 10                  |
| 2011 | 8                   |
| 2012 | 7                   |
| 2013 | 2                   |
| 2014 | 0                   |
| 2015 | 0                   |
| Total | 141                |

Table 2 shows the distribution of cross border M&A by year. Cross border M&A by Indian acquirers peaked in 2007 when the global financial crisis hit and has steadily declined since then with no recorded cross border M&A in 2014 and 2015. We do not consider any acquisition for these two years in our analysis since we try to avoid any confounding effect of multiple acquisition within three years period and our dependent variable is 3 years BHAR.

A point to note is that even though the global statistics for cross border M&A were not so strong in 2010, Indian acquirers acquired more targets in 2010 than in 2009.

Table 3 lists the distribution of friendly/hostile and cash/non-cash mergers. Ninety eight percent of cross-border mergers undertaken by Indian acquiring firms are friendly and sixty two percent are cash mergers. Like other global samples, cross border mergers undertaken by Indian acquirers are primarily friendly. Operationally, hostile bids for a cross border target would be a rare event for Indian acquirers. However, that 38 percent of the mergers are not wholly cash offer mergers indicates that a good number of the mergers involved stock offers. Indian corporate laws permit foreigners to hold equity stakes in Indian firms with some restrictions. In the absence of definitive data, we conjecture that several cross-border mergers undertaken by Indian acquirers involved stock offerings as part of the transactions.
Table 3: Deal specific descriptive statistics

|                      | Number | Percentage |
|----------------------|--------|------------|
| Acquisitions         | 141    | 100        |
| Friendly             | 138    | 98         |
| Hostile/Neutral      | 3      | 2          |
| Cash                 | 88     | 62         |
| Unspecified/Non-Cash | 53     | 38         |

Friendly vs. Hostile/Neutral and Cash vs. Unspecified/Non-cash are deal specific characteristics.

Table 4: Descriptive statistics of Buy and hold abnormal returns (BHAR) for the acquiring firm after the acquisition

|                      | BHAR(12) | BHAR(24) | BHAR(30) | BHAR(36) |
|----------------------|----------|----------|----------|----------|
| No. of observations  | 141      | 141      | 141      | 141      |
| Mean (%)             | -17.84   | -15.56   | -15.15   | -14.34   |
| Median (%)           | -16.28   | -12.29   | -9.87    | -12.5    |
| Maximum              | 138.02   | 95.59    | 89.06    | 69.66    |
| Minimum              | -284     | -149.39  | -144.75  | -112.89  |
| St. Deviation        | 67.18    | 44.42    | 39.11    | 33.34    |
| P Value              | 0        | 0.31     | 0.03     | 0.12     |

BHAR is 12, 24, 30, and 36 month buy and hold excess return following the date of acquisition.

Table 4 lists the distribution of 12, 24, 30 and 36 month buy and hold returns (BHAR) for the sample. By using BHAR we try to capture the long run performance of the acquiring firms. The mean and median BHAR are negative for the sample. This is opposite of results reported by Banerjee et al. (2014) who have reported positive BHAR for a sample of acquisitions dating from 1995 to 2011. For our sample, the post-merger performance of cross-border mergers has not been positive on average but there is wide variation in the BHAR which gradually increases over time. Also, the standard deviation of the returns declines over time. It is high for the first 12 months but declines sharply over the remaining 24 months of the 36 month period. The results suggest that the Indian acquirers are not creating long-term value for their shareholders in case of cross-border acquisitions.

Table 5 lists the descriptive statistics of variables related to acquirer and target nation for our sample of 141 Indian cross-border acquirers between 1995 and 2015.

We then present the results of the multivariate regression analysis in Table 6 with the dependent variable being the 36 month post-acquisition BHAR and the independent variables are either only deal-specific (Model 1) or deal specific and relative country-specific economic measures of the target firms combined (Model 2). We report the result for two models: One using only the deal specific variables and the other using all the variables. The two deal specific variables, log of the acquiring firm’s market value and the dummy variable for cash mergers are negative but statistically insignificant. Age of the acquiring firms is positive and significant at the 5 percent level. The dummy variables for friendly mergers and business group affiliation are each positive but statistically insignificant. As per Chakrabarti et al. (2009) firms which undertake friendly cross-border mergers and pay cash for them do better in the long run. We are unable to corroborate that finding for Indian firms. The influence of acquirer size was not statistically significant in the study by Chakrabarti et al. (2009) and we are corroborating this result in our study.
In Model 2, the business group variable is positive and statistically significant at the 5 percent level indicates that if the acquiring firms belong to a business group, they are likely to post higher post-merger BHAR. Of the fourteen target firm country-level characteristics we included as independent variables in Model 2, unrelated diversifications (negative and statistically significant at the 5 percent level) are likely to post lower post-merger BHAR. Thus, larger acquiring firms and acquisitions of targets in unrelated industries are yielding lower long-term buy and hold returns whereas acquiring firms belonging to a business group are posting higher BHAR.

The coefficient for the differences in per capita income between the acquiring and target firms is positive but statistically insignificant. Thus, when an acquiring firm in India acquires a target in a nation that has a per capita GDP smaller than that of India’s, the post-merger acquisition performance is better. A similar result was reported by Chakrabarti et al. (2009) for a global sample of acquirers. The coefficient for the openness of the target firm’s nation is positive and statistically significant at the 1 percent level. Whereas the coefficient for the difference in corporate governance and the Hofstede measure are negative and statistically significant at the 1 percent level. The Hofstede measure was reported as positive by Chakrabarti et al. (2009). We are thus reporting a negative influence of cultural distance on long-term performance of Indian acquiring firms, similar to the results reported by Li et al, (2016) for Chinese acquirers.

The Hofstede measure is negative and significant at the 1 percent level in our study, confirming the premise that larger cultural distance between the Indian acquiring firms and the nations of target firms do not contribute to better post-merger performance, a result that stands in contrast to those reported earlier by Chakrabarti et al., (2009). Thus, for Indian acquiring firms, it appears cultural distance diminishes the post-merger performance of acquiring firms and this result is statistically significant. As noted earlier, Indian managers have exposure to cultural diversity in relation to domestic acquisitions. There is a prior mindset which might be expected to contribute to higher returns when exposed to greater cultural distance in cross border acquisitions. Evidently it does not.

As has been noted earlier in prior research, statistical significance between deal specific and country wide economic variables and post-merger performance is not sufficient to arrive at meaningful conclusions about the effect of cultural distance on post-merger performance. Culture is a complex matrix of attributes and measures of it in economic analysis cannot fully capture the influence of culture on the success or failures of mergers, which as a concept, as has been pointed out by Hofstede himself, needs more critical scrutiny. Yet, we feel we have demonstrated an important divergence between what has been reported as a positive relation for a global sample of firms is not valid for a sample of Indian acquirers. However, the results being reported in our paper is in line with what has been reported by Ahern et al., (2015).

|                  | Acquirer MV ($mll) | Age (Years) | PCI Diff | Openness Target | Forex Volatility | Corp Diff | Gov. | Hofstede |
|------------------|--------------------|-------------|----------|----------------|------------------|-----------|------|----------|
| Mean             | 53,185             | 32.6        | -0.9     | 0.79           | 0.48             | 1.06      | 16.83|          |
| Median           | 5,976              | 23          | -0.96    | 0.54           | 0                | 0         | 16.42|          |
| Maximum          | 1,081,575          | 130         | -0.32    | 4.4            | 15.69            | 5         | 24.71|          |
| Minimum          | 25                 | 5           | -0.98    | 0.22           | 0                | 0         | 11.06|          |
| Std Dev.         | 151,505            | 24.11       | 0.15     | 0.94           | 2.42             | 1.52      | 2.61 |          |

Table 5: Descriptive statistics of variables related to acquirer and target nation
Of the five input variables representing the Opacity Index, the coefficients for the Corruption Median and Governance Practice are positive and statistically significant at the 1 percent level. Whereas, Deleterious Economic Policy and Efficiency of Legal System are negative and significant at the 1 percent level as well. The coefficient for the Inadequate Accounting Variable is positive but not statistically significant.

The three variables we included to measure the ease of doing business in a target country are all statistically significant. Coefficients for Enforcing Contracts and Getting Credit are positive and significant at the 1 percent level whereas coefficients for Trading Across Borders is negative and significant at the 1 percent level. Evidently, favorable norms within the target firm nations contribute positively to BHAR even though barriers to cross border trade still do persist.

To gain further insight into the moderating effects of acquire size, acquisition of targets in related industries and acquiring firms belonging to a business group, we explore the interaction of each of these variables with the Hofstede measure by three separate models and the results are reported in Table 7. The coefficients for the Business group variable is positive in Models 1 and 2 but negative in Model 3, but statistically significant in all three models. The coefficient for the Related variable is negative in all three models but statistically significant only in Models 1 and 3. The coefficient for the size variable is negative and statistically insignificant in all three models. The interaction between the business group variable and the Hofstede measure (Model 3) is the only influence that is statistically significant. The coefficient is positive and significant at the 5 percent level. In table 6, the coefficient for the business group dummy variable was also positive. Evidently, acquiring firms belonging to a business group mitigate the negative effect of cultural distance on long buy and hold returns in the context of cross-border mergers.

### Table 6: Regression analysis with Buy and hold abnormal return (BHAR) as the dependent variable for Indian acquirers

| Independent Variable     | Model 1 |        | Model 2 |        |
|--------------------------|---------|--------|---------|--------|
|                          | Coefficient | t-stat | Coefficient | t-stat |
| CONSTANT                 | -0.171  | -0.71  | 2.337*** | 4.07   |
| FRIENDLY_DUMMY           | 0.075   | 0.70   | 0.403*   | 1.70   |
| CASH_DUMMY               | -0.080  | -1.41  | -0.083   | -1.56  |
| LOG(ACQUIRER_MV)         | -0.019  | -1.17  | -0.013   | -0.75  |
| AGE                      | 0.002** | 2.14   | 0.002*   | 1.67   |
| BUSINESS_GROUP           | 0.107   | 1.57   | 0.166**  | 2.39   |
| RELATED                  | -0.132**| -2.09  |          |        |
| PCI_DIFF                 | 1.221   | 0.44   |          |        |
| OPENNES_TARGET          | 1.153***| 3.62   |          |        |
| Independent Variable                               | Model 1  | Model 2  | Model 3  |
|---------------------------------------------------|----------|----------|----------|
| CONSTANT                                          | 2.86***  | 2.916*** | 2.699*** |
| FRIENDLY_DUMMY                                     | 0.353    | 0.344    | 0.381    |
| CASH_DUMMY                                         | -0.086   | -0.095*  | -0.178   |
| LOG(ACQUIRER_MV)                                  | -0.193   | -0.016   | -0.088   |
| AGE                                               | 0.002*   | 0.002*   | 0.003**  |
| BUSINESS_GROUP                                     | 0.169**  | 0.162**  | -3.066** |
| RELATED                                           | -0.137** | -1.764   | -1.05    |
| PCI_DIFF                                           | 1.478    | 1.039    | 2.125    |
| OPENNES_TARGET                                    | 1.079*** | 1.182*** | 0.759**  |
| FOREX_VOLATILITY                                  | -0.032   | -0.039   | -0.026   |
| CORP_GOV_DIFF                                     | -2.309***| -2.477***| -2.032***|
| LOG(HOFSTEDE)                                     | -13.787***| -14.497***| -12.532***|
| LOG(HOFSTEDE)*LOG(ACQUIRER_MV)                    | 0.064    | 0.64     |
| LOG(HOFSTEDE)*RELATED                             | 0.583    | 0.98     |
| LOG(HOFSTEDE)*BUSINESS_GROUP                      | 1.148**  | 2.36     |
| CORRUPTION_MEDIAN                                 | 6.183*** | 3.27     | 5.571*** |

*** denotes significance at 1%, ** denotes significance at 5% level and * denotes significance at 10% level.
In our study we have so far concentrated on examining the effects of cultural measures on long-term returns of Indian acquiring firms. The emphasis on long-term buy and hold returns is what differentiates our study from previous studies which have explored the effect of culture on cross border announcement period returns. Nevertheless, we do examine the relationship between cultural distance and cumulative announcement period abnormal returns. Table 8 presents the cumulative average abnormal returns (CAAR) for various windows surrounding the announcement date of the merger. The CAAR for the (-2, +2) and (-5, +5) windows are positive and statistically significant at the 1 percent level. This result corroborates earlier findings for Indian cross border mergers: Indian cross border mergers post positive announcement period abnormal returns (see Banerjee et al., 2004 for a review of the evidence) whereas global samples have recorded negative or zero abnormal returns (Moeller & Schlingemann, 2005; Erel, Liao & Weisbach, 2012).

Thus, we are corroborating the announcement period returns results for Indian acquirers that have been reported in earlier studies. The (-30, +30) CAARs are positive but statistically insignificant. Li et al, (2016) have also reported positive CAARs for a sample of Chinese acquiring firms that have engaged in cross-border mergers.

Table 9 replicates the regression analysis as described in Table 6 but the dependent variable in this case is the CAAR for the (-2,+2) window instead of the 36 month post-acquisition BHAR. For model 1, the coefficient for the log of the acquirer’s market value is statistically significant at the 1 percent level but negative. So, it is the smaller Indian acquiring firms which are posting positive CAAR in cross border mergers. The coefficient for the friendly dummy is negative and significant at the 10 percent level. In model 2, the coefficient for acquirer’s market value continues to be negative and statistically significant at the 1 percent level. The coefficients for other variables which were statistically significant in Table 6 appear to be insignificant in this Table. The Hofstede measure is negative as before but statistically insignificant. Thus, the effect of the cultural measure has a negative effect on both announcement period returns and long-term buy and hold returns but the effect is statistically significant only for long-term BHAR. On the other hand, while relatively
larger acquiring firms post better long run buy and hold returns, it is the smaller of the acquiring firms which are posting higher announcement period returns. Also, cultural distance influences the longer term returns with almost no statistically significant, visible effect on cumulative abnormal returns around the announcement of the cross border mergers. To summarize, the economic variables we have explored as independent explanatory variables in this study explain the long-term BHAR but not the announcement period CAARs.

Table 9: Multivariate regression analysis with CAAR (-2, +2) as the dependent variable

| Independent Variable | Model 1 | Model 2 |
|----------------------|---------|---------|
| CONSTANT             | 0.200   | 1.624   |
| FRIENDLY_DUMMY       | -0.035* | -0.021  |
| CASH_DUMMY           | -0.003  | 0.004   |
| LOG(ACQUIRER_MV)     | -0.013*** | -0.015*** |
| AGE                  | 0.000   | 0.000   |
| BUSINESS_GROUP       | 0.001   | 0.005   |
| RELATED              | 0.021   | 0.28    |
| PCI_DIFF             | 0.351   | 0.49    |
| OPENNES_TARGET       | 0.068   | 0.85    |
| FOREX_VOLATILITY     | 0.005   | 0.35    |
| CORP_GOV_DIFF        | -0.162  | -1.12   |
| LOG(HOFSTEDEDE)      | -0.659  | -0.75   |
| CORRUPTION_MEDIAN    | 0.433   | 0.88    |
| DELETERIOUS_ECONOMIC_POLICY | -0.012 | -0.78 |
| EFFICIENCY_LEGAL_SYSTEM | -0.003 | -0.58 |
| INADEQUATE_ACCOUNTING | 0.002 | 0.24 |
| GOVERNANCE_PRACTICE  | 0.039   | 0.91    |
| TRADING_ACROSS_BORDERS | -0.005 | -0.69 |
| GETTING CREDIT       | 0.003   | 1.21    |
| ENFORCING_CONTRACTS  | 0.007   | 0.69    |
| TARGET COUNTRY FIXED EFFECTS | YES | YES |
| YEAR FIXED EFFECTS   | YES     | YES     |
| R-sq (%)             | 25.27   | 32.50   |
| Durbin-Watson Stat.  | 2.08    | 2.16    |
| No. of Observations  | 141     | 141     |

*** denotes significance at 1%, ** denotes significance at 5% level and * denotes significance at 10% level.
Conclusion

The study purported to explore the effect of cultural distance on both the long run and announcement period performance of cross border mergers and acquisitions undertaken by Indian acquiring firms. Indian acquirers are relatively new to the realm of cross border M&A and Indian acquiring firms are dominated by insiders and business group who are likely to invest more time and resources to due diligence and post-merger integration strategies should they at all cross the Rubicon in terms of engaging in cross border acquisitions. The evidence shows that even though the long-term BHAR are negative in the aggregate, Indian acquiring firms have been adversely affected by cultural distance. Greater the cultural distance between Indian acquiring firms and target firms in other nations, smaller is the long-term BHAR. However, the negative impact of cultural distance is mitigated to a degree only when the acquiring firms belong to a business group. Size of the acquirers or acquiring targets in related industries do not influence the negative effects of cultural distance on long-term buy and hold returns.

Independent explanatory variables included under the Opacity Index and the Ease of doing business criteria turn out to be statistically significant influences on the BHAR. In the aggregate, variables included in the study have effects on long-term BHAR but not on announcement period CAARs. We have shown that variables that will capture the differences between India and the foreign nations in which Indian acquiring firms have ventured into by way of cross-border mergers have their effects on long-term BHAR and not on the immediate announcement-period returns. This is a significant contribution. Also, we are able to expand on the scope of influence of cultural factors on returns to cross border acquisitions. We had hoped that given that Indian acquirers have experience to a large extent with cultural differences at home, will do better when going cross border but they evidently do not.

Measuring cultural differences is a difficult proposition; additional research is necessary in order to identify other additional factors and quantify their influences on merger returns. In particular, research into the observable and measurable attributes of business groups that mitigate the negative influences of cultural distance is warranted. Learning is an internal process that is difficult to measure and quantify. So, more research into the due diligence undertaken by business groups before embarking upon cross border mergers will provide valuable insights.

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### Appendix I

| Variable                          | Description                                                                 | Source                        |
|----------------------------------|-----------------------------------------------------------------------------|-------------------------------|
| Acquirer BHAR                    | Monthly Stock returns                                                      | CMIE Prowess                  |
| Acquirer Market Value (size)     | Natural logarithm of the acquirer's market capitalization prior to the     | CMIE Prowess                  |
|                                  | effective month of the acquisition                                         |                               |
| Acquirer Age                     | Years from the month the company began incorporated as a public company     | CMIE Prowess                  |
|                                  | to the month of the acquisition                                             |                               |
| Friendly Dummy                   | Dummy variable with value 1 for friendly acquisition and 0 otherwise        | Thomson One                   |
| Cash Dummy                       | Dummy variable with value 1 if the acquisition financed by 100% Cash and 0 | Thomson One                   |
|                                  | otherwise                                                                    |                               |
| Industry Relatedness             | Dummy variable with the value of 1 when acquirer and targets belong to the  | Thomson One                   |
|                                  | same industry and 0 otherwise                                                |                               |
| Per capita income difference     | Ratio of (Per capita GDP of acquiring nation – per capita GDP of target    | EIU Data Services             |
|                                  | nation) to (Per capita GDP of acquirer nation + Per capita GDP of target    |                               |
|                                  | nation)                                                                      |                               |
| Economic Openness of Target      | (Target Nation's Import + Target Nation's Export) / Target Nation's GDP     | EIU Data Services             |
| Nation's Forex Volatility        | Standard deviation of Exchange rate volatility of target nation with the   | EIU Data Services             |
|                                  | acquiring nation for the past 36 months immediately preceding the month of  |                               |
|                                  | acquisition                                                                   |                               |
| Corporate Governance Difference  | Acquirer Antidirector Index – Target Antidirector Index                      | LaPorta et al., 1998          |
| Hofstede Index                   | Log of Cartesian distance between Hofstede’s for cultural dimensions of the | Website                       |
|                                  | two nations                                                                  |                               |
| Corruption Median                | Index                                                                        | Kurtzman et al., 2004         |
| Deleterious Economic Policy      | Index                                                                        | Kurtzman et al., 2004         |
| Efficiency of Legal System       | Index                                                                        | Kurtzman et al., 2004         |
| Inadequate Accounting            | Index                                                                        | Kurtzman et al., 2004         |
| Governance Practice              | Index                                                                        | Kurtzman et al., 2004         |
| Trading Across Borders           | Numerical Index 1 - 190                                                     | World Bank                    |
| Getting Credit                   | Numerical Index 1 - 190                                                     | World Bank                    |
| Enforcing Contracts              | Numerical Index 1 - 190                                                     | World Bank                    |