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## Do innovative emerging market cross-border acquirers create more shareholder value? Evidence from India



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#### ABSTRACT

This study attempts to investigate the role of absorptive capacity of emerging market firms in creating shareholder value from developed market acquisitions. It analyzes the cumulative abnormal return of cross border acquisitions of listed Indian firms in Europe focusing on acquirers' research intensity. The study discovers a U-shaped relationship between research intensity of Indian acquirers and their cumulative abnormal return following acquisitions in Europe. As such, firms with no research capacity can benefit from the acquisition by accessing advanced targets, although firms with extensive research capacity outperform any of their Indian competitors as these firms have the absorptive capacity to not only exploit but also explore the knowledge base of the acquired target. Furthermore, we found a positive effect of the acquisition of a high-tech target company, regardless of the absorptive capacity of the acquirer. We also found that business group membership has a positive impact on shareholder value, although horizontal acquisitions as compared to vertical and unrelated deals have a significantly negative impact for these companies. This result is again linked to the more explorative nature of vertical and unrelated acquisitions in comparison with horizontal deals that are more based on the exploitation of existing resources and capabilities.

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#### 1. Introduction

Emerging market firms (EMFs) do not seem to follow the path of incremental internationalization (Contractor, 2013), but expand much faster (Mathews & Zander, 2007). Multinationals from emerging economies invest overseas at a relatively earlier stage of their development than their counterparts from developed economies (UNCTAD, 2006). Not only do they expand much faster, they also increasingly do so in advanced economies by means of cross-border acquisitions (CBAs). This has resulted in a steep increase of acquisitions of EMFs in advanced economies (UNCTAD, 2006). Most FDI – in terms of value – by emerging market firms in developed economies occurs through acquisitions (Ramamurti & Singh, 2009). This resulted both in positive as well in negative reactions in advanced economies. On the positive side, acquisitions are praised by target companies as sources of capital and ways to tap the home economies of the emerging multinationals (Knoerich, 2010). On the negative side, acquisitions are seen as threats or as competition against which target company governments should act in a protectionist reflex.

Indeed, EMFs that acquire companies in developed economies go against the grain of conventional wisdom of extant international business theory (Mathews, 2006). Some authors argue that EMFs behave differently from AMFs (advanced market firms) and, thus, new theories and models are required to explain their behavior. EMFs seem to lack the technology, brand, or management advantages of AMFs. Madhok and Keyhani (2012) characterize EMFs as having only 'ordinary' resources, by which they mean resources that have traditionally not been considered to be the source of extraordinary rents as is the case, for instance, for technology or brand, which are argued to underpin non-locationbound firm-specific advantages (Ramamurti, 2012). EMFs' internationalization is seen as the result of exploiting home country comparative advantages, such as cheap labor or natural resources, not firm-specific ownership advantages (Rugman, 2008; Narula & Nguyen, 2011). They argue that EMFs do not possess the firmspecific advantages that are necessary in the early stage of their international growth to improve absorptive capacity and innovative capability (Rugman & Verbeke, 2003). EMFs are therefore rather said to internationalize to obtain the ownership advantages

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they lack (e.g., Mathews, 2006; Madhok & Keyhani, 2012). This argument is sometimes referred to as the 'springboard theory' of internationalization (Luo & Tung, 2007).

In essence, there is no consensus about the applicability of using traditional resource based models to explain the sources of competitive advantages for emerging market firms. This study attempts to shed some light on this debate, in trying to analyze whether emerging market firms can create value by cross-border acquisitions in advanced markets, and what some of the drivers of shareholder wealth creation are. In particular, this study examines the acquisition behavior of Indian firms in Europe.

Most research on resource dependency explanations of value creation of acquisitions are based on empirical analyses of samples in developed economies. It is interesting to see whether they also apply to emerging market firms. It might reflect that CBAs by firms from emerging economies are accompanied by different shareholder expectations and management perspectives than for firms in developed economies. In that respect, our study contributes to the growing stream of research on the determinants of successful inorganic modes of internationalization in the form of cross-border acquisitions by emerging economy multinationals (Deng & Yang, 2015).

In particular, we advance the understanding of the relationship between capability development through internal R&D and through acquisitions in advanced markets. Therefore, we want to find out whether the absorptive capacity of emerging economy acquirers as made explicit in their research capacity has a positive or negative influence on market responses to acquisitions. In doing so, we hope to be able to answer the question whether they can link, leverage and learn from these acquisitions without much absorptive capacity to speak off or whether they need sufficient absorptive capacity to do so. As such, we want to find out whether there is a negative or positive relationship between absorptive capacity of Indian companies and financial returns when acquiring companies in Europe.

We theorize that rather than being strictly complements or substitutes, the relationship between research capacity and financial return after an acquisition might be curvilinear. Indian companies with extensive research capacity themselves can be expected to learn from an acquisition by exploring and learning from the target's knowledge base (Grant & Baden-Fuller, 2004). Subsequently, we investigate whether acquirers that lack research capacity themselves can also benefit, not from exploring and learning from the target's knowledge base, but from exploiting the knowledge access to strategic assets and trying to apply the knowledge (Grant & Baden-Fuller, 2004).

The study therefore contributes to the literature as it tries to investigate whether there is scope to compare and combine the resource based view of the firm with the theoretical perspectives of organizational learning and the learning-leveraging-linking model (Mathews, 2006) to explain successful internationalization of the emerging market firms (Guillén & Garcia-Canal, 2009). Gubbi, Aulakh, Ray, Sarkar, and Chittoor (2010) provided evidence that acquisitions by dragon MNEs from India create abnormal value if the targeted companies are operating in more advanced economies as opposed to emerging economies. They attribute value creation by dragon MNEs to the institutional environment of the home base of the target company. Unlike their approach, this study goes beyond determining whether there is a difference between acquisitions in advanced versus emerging economies and attempts to investigate whether the absorptive capacity of dragon MNEs plays a part in the ability to create shareholder value from the target they acquire in developed markets. As such, this study attempts to open up the firmlevel black-box and determine relevant emerging market firm-level characteristics and heterogeneity when acquiring companies in developed countries.

In the following sections, we first establish the theoretical background and draw hypotheses to find out how important absorptive capacity of the investing firms is in the estimated value creation of Indian CBAs in Europe. We then describe the data and the methodology, while the results are subsequently reported. The final section consists of the discussion and conclusions.

#### 2. Theoretical background and hypotheses development

#### 2.1. Emerging market firms acquiring advanced market firms

Acquisitions can be beneficial but challenging (Tuch & O'Sullivan, 2007), and cross-border acquisitions have additional benefits and challenges (Shimizu, Hitt, Vaidyanath, & Pisano, 2004). However, both in international business and strategy research, the performance of cross border acquisitions is not well received. Acquisitions in general do not seem to create above normal returns for the acquirers' shareholders (Bouwman, Fuller, & Nain, 2009; King, Dalton, Daily, & Covin, 2004; Sudarsanam, 2010).

So international expansion through acquisitions offers significant value-creation opportunities for firms; but it also presents significant challenges that jeopardize the potential hypothesized gains. In this context, various researchers highlight risks such as "liability of foreignness" and "double-layered acculturation" (Barkema, Bell, & Pennings, 1996; Eden & Miller, 2004). Such risks pertain to the differences in customer preferences, business practices, and institutional forces; and they are exacerbated impediments to the complete realization of strategic objectives.

Furthermore, lack of experience in the acquiring firm of executing acquisitions, organizational inertia in absorbing the target, and prior absence in the country of the target company may inhibit the benefits of acquisition for firm value. Additionally, complications in target assessment, misidentification of asset complementarities, informational asymmetries, and high premiums paid for the targets may also have adverse effects on the value of acquiring firms (Hitt, Ireland, Camp, & Sexton, 2001; Kissin & Herrera, 1990). Finally, managers' self-serving goals and incentives in value-reducing diversification strategies may not be entirely consistent with shareholder wealth creation (Denis, 2001). In the case of India, the more popular press sometimes sees the takeovers of European companies by Indian companies as a way for the former colonies to revenge against the former imperialist powers (Economist, 2007).

Although it is challenging for any firm to integrate and manage the target firm and extract value from an acquisition (Puranam & Srikanth, 2007; Zollo & Singh, 2004), EMFs may find it even more challenging because their managers lack the institutional resources and knowledge needed to operate in advanced countries.

The results of emerging market CBAs in developed economies are not conclusive in the current literature. For example, Gubbi et al. (2010) study CBAs by Indian multinationals between 2000 and 2007 and show that international acquisitions by Indian firms earn significantly positive value for their shareholders. Boateng, Qian, and Tianle (2008) study 27 cross-border acquisitions made by Chinese publicly-listed firms between 2000 and 2004 and find that cross-border M&As create value for Chinese acquiring firms. However, Chen and Young (2010) examine 39 Chinese CBAs between 2000 and 2008 and find that the Chinese acquiring firms with majority government ownership tend to destroy shareholder value. In addition, Aybar and Ficici (2009) examine CBA announcements made by 58 emerging-market multinationals during 1991-2004, and find that the equity markets react negatively to the emerging market CBA announcements.

#### 2.2. Absorptive capacity

The resource based view of the firm argues that firms with valuable, rare and inimitable resources are more likely to internationalize their business activities (e.g. Barney, 1991; Barney, Wright, & Ketchen, 2001; Caves, 1996; Dunning, 1998). Ownership advantages help firms to offset the liabilities of foreignness (Zaheer, 1995; Zaheer & Mosakowski, 1997) that they face when going abroad. These resources and capabilities can be viewed as a bundle of tangible and intangible assets, such as the firm's managerial skills, its organizational processes and routines, and the technology and knowledge it possesses (Peteraf, 1993). Several authors have argued that these firm-based advantages are needed in order to experience a rise in post-acquisition performance (Morck & Yeung, 1992; Chari, Ouimet, & Tesar, 2010). Consequently, firms with better ownership advantages have higher value-creating prospects, also when they engage in cross-border acquisitions.

One important factor that underlies the successful internationalization in the case of cross-border acquisitions is the absorptive capacity of the acquirer. Absorptive capacity refers to an organization's ability to acquire and assimilate information, as well as to the organization's ability to learn from it (Cohen & Levinthal, 1990; Zahra & George, 2002; Tzokas, Kim, Akbar, & Al-Dajani, 2015). The absorptive capacity construct has emerged as an underlying theme in global strategy management and has been used to explain diverse organizational phenomena such as strategic alliances, organizational learning, knowledge acquisition and transfer, and business performance (Szulanski, 1996; Harrison, Hitt, Hoskisson, & Ireland, 2001; Lane, Koka, & Pathak, 2006; Wu & Voss, 2015).

Using M&A for resolving knowledge deficiencies, however, does not necessarily result in superior returns because strategic assets often are tacit, specific and complex (Deng, 2010a; Deng, 2010b; Amit & Schoemaker, 1993). In addition, in the early stages of internationalization, firms tend to underestimate the complexities of foreign acquisitions and exaggerate the synergies from combination of the merging firms' strategic assets. To become successful in overseas acquisitions, firms need to develop the knowledge and routines so as to overcome these problems, that is, they need absorptive capacity (Zollo & Singh, 2004).

Previous studies of absorptive capacity have used R&D investments as a proxy for a firm's absorptive capacity. The idea is that R&D investments not only increases the propensities of the firm to produce new ideas and products by themselves, but also that the presence of highly trained technological staff and advanced research facilities makes the firm better able to identify and utilize new technology from the external environment. Greater absorptive capacity increases the benefits to the EMF from capability development through a developed market acquisition because the firm is able to understand, integrate and use the new knowledge from the acquisition (Makadok & Barney, 2001). For instance, absorptive capacity is required to make internal and external R&D complementary (Arora & Gambardella, 1990). By an acquisition, the stock of knowledge increases and the partner firms are able to explore each other's complementarities (Grant & Baden-Fuller, 2004). Thus, increasing emerging market firms' R&D increases the likelihood of capability development through developed market acquisitions. This suggests that internal R&D and acquisitions act as complements.

Acquirers who are better able to share and transfer complementary resources and capabilities between themselves and the acquired firms will be able to benefit more from this acquisition in the future, creating more shareholder value (Gubbi et al., 2010; Uhlenbruck, Hitt, & Semadeni, 2006; Malik & Aggarwal, 2012). Absorptive capacity is, hence, a factor that can have a positive influence on the post-acquisition performance and generates greater shareholder value.

**Hypothesis 1a.** International acquisitions in developed economies by firms from emerging economies generate <u>higher</u> shareholder value for acquiring firms with higher research intensity.

#### 2.3. Knowledge accessing

However, emerging market firms tend to lack advanced managerial skills in internal knowledge generation and in the development of absorptive capacity (Rugman, 2008). Mathews (2006) argued that dragon multinationals, in their internationalization patterns, look for linkages with foreign businesses to address these shortcomings. Being latecomers and newcomers, these multinationals are believed not to exploit their own existing resources and capabilities, but to try to access the knowledge assets from the target firms. It might pay off more to acquire knowledge from external firms rather than to have to develop these through an organic mode (Vanhaverbeke, Duysters, & Noorderhaven, 2002).

Emerging economy multinationals supposedly use international expansion in advanced countries as a springboard to compensate for their competitive disadvantages. In order to compete internationally, they need to overcome their own weaknesses quickly. Therefore, they aim to acquire capabilities and technologies such that they do not need to develop them internally. Previous studies (e.g., Luo & Tung, 2007) have already shown that when investing in developed countries, emerging economy multinationals seek access to sophisticated technology or advanced manufacturing know-how by acquiring foreign companies. Consequently, emerging economy multinationals' outward investments are triggered mainly by 'pull' factors, such as the desire to secure critical resources, acquire advanced technology, obtain managerial expertise, and gain access to consumers in key foreign markets, so that they can overcome their latecomer disadvantages (Mathews, 2006).

When firms which do not benefit from high absorptive capacity make an acquisition, the acquisition gives them access to the target firm's physical assets as well as the firm's capabilities such as internal routines, brand names, intellectual property and management expertise (Maritan & Peteraf, 2011). This suggests that acquisitions and internal R&D can be substitutes. Research indeed indicates that acquired R&D can substitute for internal R&D (Blonigen & Taylor, 2000; Heeley, King, & Covin, 2006).

We therefore expect that these developed market acquisitions will fill specific resource needs of an emerging economy acquiring firm (King, Slotegraaf, & Kesner, 2008) and can act as a substitute for internal development (Barkema & Vermeulen, 1998; Blonigen & Taylor, 2000; Hitt, Hoskisson, & Ireland, 1990; Hitt, Hoskisson, Ireland, & Harrison, 1991). These firms want to build up and develop capabilities that did not previously exist (Bell & Figueiredo, 2012). For instance, Bassant and Fikkert (1996) find for Indian firms that internal R&D and technology purchases are substitutes. As such, an EMF with low absorptive capacity, as reflected in its low research intensity, can create shareholder value because it can use the target resources to address its own lack of capabilities.

**Hypothesis 1b.** International acquisitions in developed economies by firms from emerging economies create <u>higher</u> shareholder value for acquiring firms with <u>lower</u> research intensity.

#### 2.4. High-technological target

Not only the absorptive capacity of the acquirer can play an important role, the technological intensity of the target company also plays a part in the generation of shareholder value. These

emerging economy multinationals desire to get access to advanced knowledge and capabilities available in the developed economy. They wish to utilize the knowledge and technological capabilities captured to improve their own technological and innovative capabilities (Chen, Li, & Shapiro, 2012). This can be realized by the acquisition of a target firm in the developed economy which provides access to those critical resources, advanced technology and managerial expertise (Makino, Lau, & Yeh, 2002). Hence, the knowledge and technological capabilities of the target could function as a pull factor for outward FDI by the emerging market multinationals.

Less advanced countries suffer a comparative disadvantage in knowledge development that limits the technological competitiveness of their firms, relegating them to the lower end of value added chains (Mudambi, 2008). These firms are perceived as suffering a competitive disadvantage in technology because of the underdeveloped innovation systems in their home countries. The reason is that there is a larger technological gap between innovation systems in developing versus in advanced countries (Furman, Porter, & Stern, 2002). As a result, EMFs are exposed to fewer and less sophisticated technologies in their home countries and tend to have less advanced technological capabilities (Kumaraswamy, Mudambi, Saranga, & Tripathy, 2012).

Since high-tech AMFs possess considerable advanced technology and management skills that have diverse product and process knowledge, knowledge acquisition provides potential opportunities for EMFs to learn more through the combination of existing and different complementary skills (Dussauge & Garrette, 2000; Rothaermel, 2001). Although firms generally take a longer time to apply complementary knowledge, it is not economically feasible to develop the knowledge internally (Teece, 1986). In addition, complementary knowledge could stimulate new and challenging ideas (Kotabe, Jiang, & Murray, 2011).

**Hypothesis 2a.** International acquisitions of high-tech targets in developed economies by firms from emerging economies generate higher shareholder value for acquiring firms.

Furthermore, when taking over a high-tech target company, acquiring companies are required to have the necessary research capacity in order to be able to absorb the acquired knowledge. The quality of a firm's comprehension of external knowledge is a function of its own prior knowledge and knowledge-related learning capabilities (Cohen & Levinthal, 1990; Jansen, Van Den Bosch, & Volberda, 2005; Lane et al., 2006). As such, high-tech acquisitions allow EMFs to realize more value because these acquisitions enable EMFs to solve the comparative technological disadvantage of their home countries and upgrade their home operations with the acquired technology to best practice provided they have the necessary absorptive capacity (Chen & Cuervo-Cazurra, 2012). Therefore, we argue that the effect of research intensity of the acquiring firm is an important moderating variable in creating shareholder value from the acquisition of a high-tech company.

**Hypothesis 2b.** International acquisitions of high-tech targets in developed economies by firms from emerging economies generate higher shareholder value for acquiring firms with <u>higher</u> research intensity.

However, at higher levels of research intensity of the acquiring company, there might be limits to the beneficial effects of acquiring a high-tech target. Although acquiring firms with higher research intensity have higher prior knowledge in order to be able to assimilate the knowledge of high tech targets better, increasing research intensity might be detrimental for two reasons. First, the extensive research capacity built up can make the new knowledge acquired from the target company redundant. Alternatively, the

difference in knowledge bases can be considerable making integration cumbersome.

In the first case, the more R&D resources an acquirer holds, the greater the possibility of redundant resources following the acquisition of an R&D-intensive target. The likelihood of any resource redundancy in a combined firm will increase with the size of a target firm's R&D investments. As such, there may be significant resource redundancy between target and acquiring firms and diminishing returns to acquirer R&D (Zollo & Singh, 2004). As a result, lower returns can be expected from prior investments in those resources (King et al., 2008).

In the second case, the more R&D resources an acquirer holds, the greater the difficulty of integrating different knowledge bases. The integration of knowledge from the target company can become more difficult as a result of increasing proprietary knowledge bases, while the effectiveness and efficiency of intellectual capital present at the target firm might decline (Lemieux & Banks, 2007). As R&D investments increase or exceed the specific technology needs of an acquirer, a target's high technological resources become less beneficial and potentially counterproductive (Uhlenbruck et al., 2006).

**Hypothesis 2c.** International acquisitions of high-tech targets in developed economies by firms from emerging economies generate <u>lower</u> shareholder value for acquiring firms with <u>higher</u> research intensity.

#### 2.5. Business group

The resource based view of the firm is also a useful perspective in the context of business groups that may have group-specific resources and capabilities (Chang & Hong, 2000; Guillén, 2000; Hoskisson, Kim, White, & Tihanyi, 2004). With the absence of proper institutions, transaction costs in acquiring inputs such as technology, finance and personnel increase. When these factors are hard to attain in the open market, business groups can substitute for these deficiencies by creating their own internal markets (Gubbi et al., 2010). Consequently, business groups may overcome the institutional voids at country level by constructing their own, internal systems (Almeida & Wolfenzon, 2006; Cuervo-Cazurra & Genc, 2008). Through mechanisms like intra-group training programs, transfer of skilled personnel, reallocation of funding, and intra-group knowledge sharing, business groups are able to improve their capabilities and economic performance.

Group membership may also provide privileged access to resources and capabilities outside the firm, which might not be available to other independent domestic firms. Hence, superior access to internal and external resources may play a crucial role in capability creation and becoming internationally competitive (Bruche & Becker-Ritterspach, 2010; Lensink, van der Molen, & Gangopadhyay, 2003).

Business group membership increases the firm's potential absorptive capacity by allowing firms to learn from each other how to successfully access resources and capabilities. Therefore, in countries with less developed innovation systems, business groups can facilitate access to innovation by providing the required institutional infrastructure (Mahmood & Mitchell, 2004). It is also possible that business groups have a better potential for developing absorptive capacity than firms operating independently in the same business environment. Thus, a combined perspective of the resource based and organizational learning theory may also help better understand the international diversification of firms belonging to business groups from emerging economies (Hoskisson et al., 2004).

**Hypothesis 3a.** International acquisitions in developed economies by firms from emerging economies that are part of a business group generate greater shareholder value for acquiring firms.

Furthermore, business group membership might be moderated by the type of acquisition. As horizontal acquisitions expose firms to stimuli that fall within the organization's familiar knowledge base, they are expected to offer an array of opportunities and challenges that are suitable for exploitation. The greater the overlap between the acquiring and acquired firms, the lower the integration costs, the higher the efficiency gains through the exploitation of potential synergies, and the better the strategic and technological fit. EMFs can therefore advance their global interests by engaging in exploitation of horizontal acquisitions to gain access to complementary assets (Athreye & Godley, 2009).

When a firm undertakes a vertical or unrelated acquisition, the difference between the acquiring and the acquired firms is significant and explorative learning is increased (Wright, Filatotchev, Hoskisson, & Peng, 2005). This departure from the firm's knowledge base promotes experimentation; encourages access to new markets, resources and products; and facilitates learning beyond the current knowledge boundaries (Gavetti & Levinthal, 2000). However, expansion into unrelated businesses is characterized by more risk and a higher likelihood of failure (Pennings, Barkema, & Douma, 1994). Firms pursuing unrelated acquisitions may find it difficult to build upon existing knowledge and routines (Rabbiosi, Elia, & Bertoni, 2012).

When firms that are part of a business group choose vertical or unrelated expansion strategies, it enables them to leverage group capabilities as business groups are more diversified than standalone firms (Kock & Guillen, 2001). Besides, managerial talents in business groups can be developed across a wider range of sectors (Li, Ramaswamy, & Pécherot Petitt, 2006). For standalone firm, however, it might be more difficult to carry out vertical or unrelated acquisitions. As such, it might be better for standalone firms to carry out horizontal acquisitions as compared to business group companies that could be better off making vertical or unrelated acquisitions.

**Hypothesis 3b.** <u>Horizontal/vertical</u> international acquisitions in developed economies by firms from emerging economies that are part of business groups generate <u>lower/higher</u> shareholder value for acquiring firms, respectively.

#### 3. Data and methodology

#### 3.1. Data collection and sample

To test these hypotheses, we use completed cross-border acquisitions by publicly traded Indian firms in Europe for the period between 1996 and 2010 reported in the Zephyr database (Bureau Van Dijk). The Zephyr database contains the name of the acquirer, the name of the target, the target country, the announced date of the acquisition, the completed date of the acquisition, the deal type and size, the US SIC codes of company activity and other variables such as size and other financial information. Deal method and deal value data were often incomplete. We tried to fill these gaps using newspaper sources related to the announced acquisitions. Given that these are acquisitions by listed companies, the financial press sometimes allowed us to plug some of these data gaps, for instance, in terms of deal size.

Subsequently, we merged this database with additional acquirer company data from Prowess (Center for Monitoring of the Indian Economy). The Prowess database contains additional information on the Indian acquirers such as R&D intensity and the firm's affiliation to a business group. The Prowess database, for instance, specifically details which business group a company belongs to, or whether it is a standalone firm.

In total, the merged dataset contained 320 acquisitions. To calculate the impact of a cross border acquisition on the (shareholder) value of the firm, we use the abnormal returns methodology. It uses event study methodology introduced by Fama, Fisher, Jensen, and Roll (1969) and is the standard method of measuring security price changes in response to an event or announcement.

To calculate the cumulative abnormal return, stock return data were collected from the Bombay Stock Exchange. This is the major stock exchange in India and the fifth in terms of number of transactions in the world. If the stock returns data were not available, we had to drop the acquisition.

Some acquisitions are undertaken over a longer period of time. However, we only take the 'abnormal' stock price effect of the first announcement of the acquisition into account. It is important to capture the market expectation of the acquisition performance, based on the first announcement of the acquisition only and without any interference of other announcements within the event window.

These restrictions leave **147** acquirers in our dataset. In terms of country of destination, the lion's share of acquisitions take place in the UK (54), followed by Germany (20), Italy (16) and France (11). The rest are scattered in another thirteen countries. Most of the acquirers are firms from the information technology industry (36), chemical industry (35) and automotive industry (23). Other noteworthy acquirers are textile companies (8) and equipment (9) and engineering companies (4). Acquisitions also mainly take place in the same industries: information technology (30), chemicals (29), automotive (11) and electric and electronic equipment (11), and engineering (13).

#### 3.2. Dependent variable

We have used stock market-based performance measures and event study methodology for our study (Schoenberg, 2006). In particular, we have calculated the cumulative abnormal returns (CARs) as a result of acquisition announcements for listed companies from India. This technique identifies the impact of a specific event upon a security's rate of return (Fama et al., 1969). It is based upon the assumption of capital markets being semistrong-form efficient (Sinha & Srinivasan, 2012). The security prices at any point in time incorporate all publicly available information, and the impact of any new public information gets factored into the security prices instantaneously. Other than the market efficiency assumption, the event study methodology also assumes that the market did not anticipate the event and that there are no confounding events close to the event under considerations that could influence the stock market valuations of the focal firm (McWilliams & Siegel, 1997).

The wealth change for shareholders reflected in the stock price movement as a result of the announcement of the acquisition has been used extensively both by scholars in finance, strategic management, and international business (Markides & Ittner, 1994; Moeller, Schlingemann, & Stulz, 2003; Moeller, Schlingemann, & Stulz, 2005; Bouwman et al., 2009; Gubbi et al., 2010). In particular, acquisition studies that examine the value creation of acquiring firms from emerging economies has also been used extensively (see Boateng et al., 2008; Aybar & Ficici, 2009; Kohli & Mann, 2011; Bhagat, Malhotra, & Zhu, 2011; Gubbi et al., 2010).

The window for assessing wealth increase is an important consideration. It depends on one's view of the efficiency of the capital markets. Assuming informational efficiency, they foresee all the future benefits and costs of an acquisition, and factor them into stock prices at the time of the acquisition. A short event window places great reliance on a prescient capital market that can fairly quickly impound the full ramifications of the acquisition as

well as the probability of realizing the acquisition benefits in the stock prices. One could argue that the market takes time to digest information and at the same time awaits more information to assess the extent of the benefits and the probability of their realization. Lengthening the event window to several years (mostly 3–5 years in the literature) instead creates other problems, however. First, the longer the event window, the greater are the chances that other events such as strategic, operational and financial policy changes of the acquirer firms will impact on their valuation. Second, the long windows raise questions about the efficacy of statistical test procedures, and reduce the reliability of test results (Sudarsanam, 2010). Moreover, the ex-ante measurement of performance is proven to correlate quite well to ex-post performance, demonstrating the predictive validity of short term performance for longer term performance (Kale, Dyer, & Singh, 2002; Haleblian, Kim, & Rajagopalan, 2006). Finally, stock market performance measures assessed in event study methodologies are relatively unbiased compared with other measures, and invariant to differences in accounting policies across nations and firms (Cording, Christmann, & King, 2008).

For all these reasons we believe it is justified to use cumulative abnormal returns to shareholders as a measure of acquisition performance. We used the cumulative abnormal returns calculated over a window period of 21 days (10 days prior to announcement through 10 days following the announcement) which we obtained from the event study analysis. We have thereby opted on the side of caution as shorter window periods give more outspoken market responses. Some authors have used 3-day-windows but indicated that the results "weaken" as the window is lengthened (Aybar & Ficici, 2009, Table 4). In Appendix A, we report the methodology for the calculation of the cumulative abnormal return that we adopted.

#### 3.3. Explanatory variables

Our first independent variable of interest is the innovative capabilities of the Indian acquiring firms, which we will measure through the research and development (R&D) intensity. This is expenditures on R&D divided by sales in order to measure the relative importance of R&D for the acquiring company. Cohen and Levinthal (1990) were the first to measure absorptive capacity. They asserted that while R&D obviously generates innovations, it also develops the firm's ability to identify, assimilate, and exploit knowledge from the environment. Thus, they used R&D intensity as a proxy for absorptive capacity. Using R&D intensity (Stock, Greis, & Fischer, 2001; Tsai, 2001) is still the most popular way to measure absorptive capacity. Kim (1998) and Kodama (1995) note the crucial importance of a firm's internal R&D in determining its ability to import, comprehend, and assimilate external knowledge. They argue that investments in R&D are crucial to supporting different research projects, a process that enhances learning by doing. This learning enables the firm to import and use externally created knowledge. Kim (1998) explains that R&D funds enable the firm to employ outside experts who are knowledgeable in emerging fields, which can compress the absorption cycle of externally acquired information. Investments in maintaining a strong R&D program also allow firms to attract and keep talented scientists who follow scholarly developments in the field (Kim, 1998; Zahra, 1996). There are even empirical tests that confirm and support these arguments (Gambardella, 1992; Mowery, Oxley, & Silverman, 1996).

The idea is that R&D investments not only increases the propensities of the firm to produce new ideas and products by themselves, but also that the presence of highly trained technological staff and advanced research facilities makes the firm better able to identify and utilize new technology from the

external environment. Moreover, as argued by Tallman, Jenkins, Henry, and Pinch (2004), investment in R&D activities additionally acts as a firm-level measure of absorptive capacity, since it (indirectly) facilitates knowledge transfers from other firms (Chen et al., 2012).

Whereas Hypothesis 1a expects a positive impact of firm-level R&D intensity on its value-enhancing potential through acquisitions. Hypothesis 1b, on the other hand, expects a negative impact as the less research capable firms have more to gain from developed market acquisitions. In order to analyze these contradictory hypotheses, we have introduced not only the linear R&D intensity variable but also the quadratic term. As such, we can try to disentangle the possible non-linear relationship between R&D-intensity and abnormal return, and make sense of these countervailing hypotheses. If our hypotheses 1a and 1b are right, we should observe a U-shaped relationship between R&D-intensity and our dependent variable.

Our second explanatory variable of interest is high-tech targets. In order to determine whether the targets were high-tech companies, we used the benchmark industry classification study by Kile and Phillips (2009) to correctly classify high-technology firms. They developed procedures to reduce sampling errors when using industry classification systems to secure samples of hightech firms. They found a matching procedure using three-digit SIC codes that had a 95% success rate in matching high-tech industries to high-tech firms. On the basis of this methodology, we created a dummy variable (Target HT) for target firms that are high-tech firms. We expect a positive coefficient for this dummy variable in line with Hypothesis 2. In order to determine whether the absorptive capacity of acquiring companies has any moderating effect on these high-tech acquisitions, we also introduced interaction variables between high-tech targets and R&D intensity of the acquiring companies.

In order to measure the impact of business group membership, we include a dummy variable for firms that are part of an Indian business group. This was determined on the basis of the information supplied in Prowess. The database mentions which business group a company belongs to, or whether it is a standalone firm. For instance, Tata Automotive is part of the larger Tata Group, which also includes Tata Steel or Tata Consultancy Services. In line with Hypothesis 3, business group membership is expected to bring more shareholder value creating potential for acquiring firms. In order to check whether there are any differences between horizontal, vertical or unrelated acquisitions for these business group firms, we also introduced interaction variables between business group companies and horizontal or vertical acquisitions. Unrelated acquisitions are the base category.

#### 3.4. Control variables

Apart from these explanatory variables, we include a number of additional control variables. First, the model attempts to take account of how good a deal it was. This variable (Good Deal) is measured by dividing the acquired share of the value of the target firm by the deal value. It is obviously expected that the lower the relative price the acquirer needed to pay for the acquisition, the better the market reaction.

Second, the relative size (Rel Size) of the deal might matter. This is measured by dividing the size of the target by the size of the acquiring firm. The larger the relative size, the higher the expected response on the stock market.

Third, the past performance of the target firm (Target ROA) might also be pertinent to the value creating potential (Markides & Ittner, 1994; Gubbi et al., 2010). The better the previous performance of the target firm, the higher the expected return from this investment.

Fourth, two variables to take account of previous internationalization steps are included. The export intensity (EXPint) measures the importance of export markets for the acquiring firm and is expected to have a positive impact. It is measured as the average of the exports of the acquiring firm divided by sales over the three years prior to the acquisition. Firms that already focus on foreign markets will be able to use the existing distribution network of acquired targets to further facilitate their export markets. The outward foreign direct investment intensity (OFDint) measures the importance of former investments that have been made abroad and is expected to have a negative impact. Acquiring firms that already have made other foreign direct investments will most likely incur restructuring and coordinating costs. The variable is measured as the expenditures for foreign direct investments of the acquiring firm divided by sales.

Fifth, we control for the fact whether these acquisitions are horizontal, vertical or unrelated investments. We control for horizontal takeovers because literature has found that the acquisition of horizontally related target firms results in increased post-acquisition performance (Hayward, 2002; Kusewitt, 1985; Palich, Cardinal, & Miller, 2000; Rumelt, 1982; Capron, Dussauge, & Mitchell, 1998). Consequently we expect that this variable will have a positive impact on the cumulative abnormal return. This variable is a dummy variable and equals one when the target and the acquirer share the same 4 digit US SIC code (Alfaro & Charlton, 2009).

Vertically related acquisitions enable the firm to take advantage of cross-border factor cost differences (Helpman & Krugman, 1985). A recent study by Fan and Goyal (2006) also discovered that vertically related acquisitions are associated with higher positive announcement wealth effects in the stock market as compared to unrelated acquisitions. Consequently, we expect that acquisitions of vertically related target firms (down – or upstream) will have a positive impact on the return.

Furthermore, we include a dummy to account for full acquisitions. The degree of ownership and control that foreign MNEs maintain on the local target firm is a crucial dimension (Brown, Dev, & Zhou, 2003; Shrader, 2001). Transaction cost economics is among the theories most widely used to study foreign subsidiary ownership policy (Makino & Neupert, 2000; Yiu & Makino, 2002; Zhao, Luo, & Suh, 2004). It argues that the choice between partial and full ownership depends on the net benefits of sharing equity relative to those retaining full ownership. Hennart (1991) argues that investing firms tend to choose joint ownership with a local partner over full ownership when they need continuous access to local firms' resources of, for example, knowledge and know-how, which are subject to high market transaction costs (Makino & Neupert, 2000). Empirical studies suggest that these arguments hold not only for greenfield joint ventures (Brouthers, 2002; Dikova & van Witteloostuijn, 2007), but also for partial ownership acquisitions (Chiao, Lo, & Yu, 2010; Fatica, 2010).

Partial acquisitions allow residual ownership by some important existing shareholders who can continue to provide much needed resources and know-how. For example, they might have unique strategic planning and governance know-how related to building and maintaining the technological capabilities of their companies (Baysinger, Kosnik, & Turk, 1991). In particular, local knowledge is highly embodied in local human resources (Chen et al., 2012), the management practices of which are by and large shaped by strong local forces. As such, a full or majority owned takeover could have damaging effects on the original combination of resources when the main aim of the acquiring firm is exploration and learning. The targeted knowledge is largely tacit in nature and hence difficult to assess and access. It is challenging to identify and collect promising sources of knowledge, put them into an adequate

context and act accordingly, if linguistic, cultural and social barriers cause misinterpretations, mistakes and delays. These obstacles are especially pronounced when foreign firms search for valuable sources of innovation abroad (Al-Laham & Amburgey, 2005). When MNEs invest in foreign markets not to capitalize on existing competitive advantages but to create assets, failures in input factor markets in the host country may lead MNEs to form joint ventures with local firms. As such, it is suggested that firms that are more interested in exploring new technologies will be more inclined to have partial ownership. Instead, firms more interested in exploiting existing capabilities will be more likely to prefer majority control. Therefore, Indian firms that take over all the shares of the European target firms are expected to realize lower abnormal returns.

Finally, we also control for host countries, sectors and years, in order to check for any differences between host countries, over time and between various industries, such as between manufacturing and service sectors. As Indian companies might, for instance, have a cultural, linguistic and historical link to the UK, there might be differences depending upon the location of acquisition. Besides, given that there might be variations over time, for instance, as a result of the financial crisis, we want to make sure these have been taken into account. A distinction between manufacturing and service industries might also be useful given that Indian companies seem to be more advanced in service delivery industries than in manufacturing industries.

We test our hypotheses using an event study methodology. The acquisition performance is first calculated using the event study methodology. The calculated stock price effect of each acquisition is then regressed on the independent variables and control variables in an orderly least squares regression.

#### 4. Results

#### 4.1. Descriptive results

Table 1 presents the descriptive statistics whereas Table 2 shows the correlation matrix for variables included in the study. The descriptive statistics indicate that the R&D intensity varies between zero and twenty percent, a high yet acceptable range, especially given the research intensity of the information technology industry contained in the sample. The average R&D intensity is about 2.5 per cent. Fifty three targets are high tech companies, while 103 Indian companies are part of a business group. Outward investment ratios of Indian companies are quite low at less than one percent of total assets, while export intensity is relatively high at 40 percent, on average. Most Indian firms acquire a majority in the target company, with the median value at 100% ownership. Sixty-five deals are horizontal acquisitions, while 21 deals are vertical and the remainder of the acquisitions are unrelated acquisitions. On average, Indian companies pay under book value for their acquisitions, although there is huge variation in the deal values as compared to the size of the target. The financial health of the targets also has huge variation, although the median return of the targets prior to acquisition is about 1 percent on total assets.

None of the variables demonstrate problems of correlation (see Table 2). R&D intensity is negatively correlated with the return of the acquisition, while high tech targets and business group acquirers are positively correlated.

#### 4.2. Regression results

In order to determine any partial impact of the explanatory and control variables, we ran six different models. The results are reported in Table 3. We started off with only the dependent

**Table 1** Descriptive statistics.

Variable	Observations	Mean	Std. Dev.	Minimum	Maximum	
CAR	148	.0136835	.1645384	6073965	.6463053	
R&Dint	147	.0253269	.04651	0	.1946785	
Target HT	148	.3581081	.4810721	0	1	
<b>Bus Group</b>	148	.6959459	.4615676	0	1	
OFDint	132	.0013966	.002991	0	.0180595	
EXPint	147	.4065263	.3415308	0	1	
Full own	148	.6756757	.4697114	0	1	
Horizontal	148	.4391892	.4979735	0	1	
Vertical	148	.1418919	.3501241	0	1	
Rel Size	97	.0992056	.1877148	.000000125	1.230982	
Good deal	<u>65</u>	182.8974	292.1214	.0000669	1657	
Target ROA	91	=.0045641	.1959484	7626922	.3611838	

variables of interest in order to maximize the number of observations. We subsequently added more and more control variables to test the robustness of the explanatory variables, before adding the interaction variables. As a result of the addition of increasing numbers of variables, the number of observations significantly declines. This, however, does not impact the results. Although there are small differences for the variables in terms of coefficients and significance levels, the results are robust.

Model 1 shows that R&D intensity has a negative coefficient, while the quadratic term of R&D intensity has a positive coefficient. We have plotted the expected return to R&D intensity in Fig. 1, which clearly illustrates the existence of a U-shaped relationship between R&D intensity and cumulative abnormal return. These results indicate, on the one hand, that firms that have a low R&D intensity have a better market response than firms with a median level of research intensity, while, on the other hand, that those firms with a high R&D intensity have a better market response than firms with a median level of research intensity. As such, it is safe to say that we find support for Hypothesis 1a that put forward that Indian acquirers who possess high innovative capacity realize a higher return, while we also find partial support for Hypothesis 1b that stipulates that firms that are lacking absorptive capacity could benefit from acquisitions.

Taken together, the results show that there is a significant and negative impact of research capacity on the return of the acquisition for median levels of R&D intensity but that this negative effect declines as the R&D intensity grows before it becomes positive. These results are robust across all the models.

The results furthermore confirm Hypothesis 2a. Deals targeting high-tech companies clearly outperform deals involving non hightech targets, supporting the strategic asset seeking behavior of the Indian acquirers. The results also confirm Hypothesis 3a whereby Indian acquirers belonging to business groups seem to be able to put the resources and capabilities of the acquired firm to better use than standalone firms.

Model 2 then adds the outward foreign direct investment intensity, the export intensity, the ownership structure and type of acquisition (horizontal or vertical with unrelated diversification as the base category) of the Indian firms to the equation, as well as the relative size of the target compared to the acquirer. The results indicate that the outward foreign direct investment intensity has a negative impact while the export intensity has a positive impact, although the coefficients for the latter variable are only significant in some models. As such, there is only limited evidence for these findings. Relative size has a positive impact on the value after acquisition in most models. Neither model 2 nor the subsequent models find any corroboration for the impact of full ownership.

Model 3 adds the Good Deal variable, which does not seem to have an impact. This indicates that deal efficacy is not a significant factor in determining value creation given that the variable Good Deal is insignificant. Paying a premium does not seem to offset expectations. Nor do the previous profits of the target firm, introduced in model 4, have a significant impact on the shareholder value created.

In model 5 we observe that the cumulative abnormal returns from the acquisitions are higher for the acquisition of industrial companies than for service companies. This seems to suggest that Indian companies have less to learn from service industry acquisitions, while they seem to benefit more from manufacturing acquisitions. Besides, there is an increased value creation when an acquisition is carried out in the UK. Given India's linguistic, cultural and historical relation to the UK, this seems to improve the potential of these deals.

In model 6, we test the moderating Hypotheses 2b, 2c, and 3b. Hypotheses 2b and 2c, which study the moderating impact of research intensity on high-tech acquisitions, are not confirmed. As such, there is no significant difference in shareholder value for low or high research intensity of the acquiring company in the case of high-tech acquisitions.

**Table 2** Pearson correlation table of the dependent and independent variables.

	CAR	R&Dint	Target HT	Bus Group	OFDint	EXPint	Full own	Horizontal	Vertical	Rel Size	Good deal	Target ROA
CAR	1											
R&Dint	-0.0614	1										
Target HT	0.1860	0.4452	1									
<b>Bus Group</b>	0.4896	0.1350	-0.0846	1								
OFDint	-0.1734	0.1760	0.2322	=0.1428	1							
EXPint	=0.0036	0.2155	0.3495	=0.2740	0.1848	1						
Full own	=0.0741	-0.0030	0.1000	-0.0470	-0.0235	-0.1070	1					
Horizontal	0.1619	0.0265	0.1415	0.0086	-0.0511	0.1760	=0.0612	1				
Vertical	-0.1253	-0.2014	-0.1705	-0.0116	0.1809	-0.1209	=0.0801	=0.3623	1			
Rel Size	0.1329	-0.1467	0.0927	-0.2255	0.2109	0.0579	0.0645	-0.0797	0.0653	1		
Good deal	0.0937	-0.0850	-0.1581	0.1502	-0.0858	-0.1567	0.1117	0.3695	-0.0823	0.1137	1	
Target ROA	0.0526	0.0542	0.0884	-0.1902	0.1365	0.0841	0.1806	=0.0187	=0.1836	0.1149	=0.1546	1

Table 3 Results of the OLS regression with 21-day window CAR (cumulative abnormal return) as the dependent variable.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
R&Dint	-2.06333**	-2.64684 <sup>**</sup>	-3.54025 <sup>**</sup>	-4.10623***	−5.11978 <sup>***</sup>	-6.48711 <sup>**</sup>
	(0.027)	(0.019)	(0.024)	(0.017)	(0.00519)	(0.01215)
R&Dint <sup>2</sup>	10.74328	13.12414**	16.18871 <sup>*</sup>	17.45937 <sup>*</sup>	21.24245	114.33927
	(0.054)	(0.043)	(0.076)	(0.068)	(0.03007)	(0.08531)
Target HT	0.06596**	0.10847***	0.13413**	0.15530	0.19560***	0.20393***
	(0.030)	(0.009)	(0.015)	(0.011)	(0.00361)	(0.00148)
Business	0.10549	0.20029***	0.27856	0.28745	0.26449	0.47335
Group	(0.000)	(0.000)	(0.000)	(0.000)	(0.00007)	(0.00000)
Ofdint		-7.52303	-11.31116	-14.25064	-13.06231	-17.43128
		(0.150)	(0.145)	(0.173)	(0.21466)	(0.12551)
Expint		0.10156	0.05229	0.03841	0.08363	0.20119
		(0.086)	(0.494)	(0.657)	(0.35565)	(0.01630)
Fullown		-0.03411	-0.02913	-0.05473	-0.05256	-0.00970
		(0.329)	(0.496)	(0.248)	(0.26603)	(0.82125)
Horizontal		0.03354	0.04998	0.01878	0.01092	0.40567***
		(0.360)	(0.348)	(0.751)	(0.85244)	(0.00015)
Vertical		-0.04552	-0.03555	-0.03300	-0.02968	0.09237
		(0.337)	(0.533)	(0.594)	(0.62771)	(0.46401)
Rel Size		0.11829	0.23168**	0.20824	0.16697	0.27486**
		(0.168)	(0.046)	(0.089)	(0.17711)	(0.01042)
Good Deal			-0.00003	0.00004	0.00007	0.00012
			(0.756)	(0.695)	(0.54530)	(0.21590)
Target ROA				0.22046	0.23187	0.17580
				(0.159)	(0.15143)	(0.19786)
Services					$-0.13720^{\circ}$	$-0.22230^{***}$
					(0.09234)	(0.00273)
UK					0.04080	0.10899**
					(0.43966)	(0.02352)
TargetHT x						0.85511
R&Dint						(0.72401)
TargetHT x						-89.84056
R&Dint <sup>2</sup>						(0.15375)
Horizontal x						-0.51895
Bus. Group						(0.00003)
Vertical x						-0.13308
Bus. Group						(0.34775)
Constant	-0620423**	-0.1627366	$-0.2217002^{***}$	-0.2056088***	-0.19371**	-0.45078
	(0.025)	(0.002)	(0.002)	(0.009)	(0.02558)	(0.00003)
$R^2$	0.109	0.335	0.518	0.526	0.56095	0.74862
N	147	96	60	54	54	54

Unstandardized regression coefficients are reported; robust t-statistics are given in parentheses.

Furthermore, whether the acquisition was horizontal or vertical had no impact on the value creation in the previous models. However, if we compare these results to Model 6, where the interaction variable has been added with group membership, the results for horizontal acquisitions become significant. These results confirm Hypothesis 3b and indicate that horizontal acquisitions realize more value for standalone firms, while these

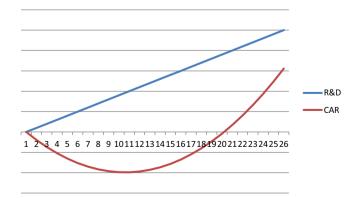


Fig. 1. The relationship between the acquirer's R&D intensity and the cumulative abnormal return (CAR).

acquisitions lead to a lower market response for business group affiliated companies.

#### 5. Discussion and conclusion

This study set out to find out whether absorptive capacity by Indian firms that acquired European companies were conducive to shareholder value creation or not. Although it must be realized that in general it is not obvious for acquisitions to create value, it is more relevant if formulated as an inquiry into the determinants of value creation or destruction (King et al., 2008). In answering this research question, this study also wanted to add to the academic debate on the firm-specific advantages of firms from emerging markets, and their role in the internationalization of these firms.

On the one hand, the resource based view of the firm and organizational learning theory led us to hypothesize that absorptive capacity matters to the acquiring firm. Firms with a high R&Dintensity have the most to gain from acquiring firms in a developed market such as Europe. Given their absorptive capacity, they are able to create more value from these acquisitions. In this respect, in-house R&D and acquisitions seem to be complements.

On the other hand, the results indicate that there is some merit to the linkage-leverage-learning framework that hypothesizes that laggard firms try to upgrade their lacking innovative capabilities

<sup>\*</sup> p < 0.10 significance levels based on two-tailed tests.

p < 0.05 significance levels based on two-tailed tests.

p < 0.01 significance levels based on two-tailed tests.

through acquisitions. Our results indicate that firms that have low levels of R&D intensity have a better market response after an acquisition than firm with some R&D intensity. This suggests that investors find asset seeking behavior of firms that lack proper absorptive capacity more productive than firms that have built up some absorptive capacity. This is in line with the knowledge accessing hypothesis, which states that companies that have a greater technological gap have more to gain from upmarket acquisitions by accessing the knowledge base of the target. In this respect, in-house R&D and acquisitions can be substitutes.

Taken together, our results show a U-shaped relationship between R&D intensity and cumulative abnormal return. This means, on the one hand, that firms that have a low R&D intensity have a better market response than firms with a median level of research intensity, while, on the other hand, that firms with a high R&D intensity also outperform firms with a median level of research intensity. As such, there is some evidence to support both the absorptive capacity and knowledge accessing hypotheses.

Furthermore, our results strongly support that high-tech acquisitions allow EMFs to realize more value because these acquisitions enable EMFs to solve their technological disadvantage and upgrade their operations with the technology acquired from the target company. This result indicates that it not only matters who the acquiring company is but also what type of target company it is. A high-tech company clearly offers more opportunities in terms of augmenting but also exploiting the acquired knowledge base throughout the Indian acquiring company.

Business group membership is also conducive to shareholder value creation given the positive and significant results. Our results indicate that it is better for standalone firms to try to access knowledge within their existing sector. Research has indicated that acquirers which perform R&D in the same general areas as a target firm can overcome information asymmetries that hinder integration of technology resources. This is clearly more relevant for stand-alone firms than for business-group companies that can draw from a more diversified knowledge base. Furthermore, for business group companies horizontal acquisitions are deemed less interesting than vertical or unrelated acquisitions where the opportunities for exploration are more extensive (Rabbiosi et al., 2012). A similar conclusion can be drawn for the services dummy. Given the outstanding reputation of India in the service delivery industry, there seems to be less need for accessing knowledge in Europe in that area, yet more value of learning in the European manufacturing sector.

The results for previous outward investment intensity of the acquiring firm are insignificant, while export intensity has a significant positive influence. As far as previous investment experience of Indian acquirers is concerned, there might be countervailing forces at work rendering the variable insignificant. On the one hand, previous investment experience would be expected to improve the results of any new investments (Luo & Peng, 1999). However, on the other hand, for firms that have already established operations abroad, any new acquisition would aim to extend the existing operations, for instance, by increasing market share or by deepening the local supply chain. Therefore, one would expect some (re)alignment (Kogut & Singh, 1988; De Beule, Elia, & Piscitello, 2014), leading to an increase in sunk costs and restructuring costs. As a result of these countervailing forces, the coefficient for previous outward foreign direct investment is insignificant. As far as export intensity is concerned, the results indicate that the acquisition would be a boon for any existing exports as it would probably assist in improving the distribution network.

In conclusion, our study contributes to the growing stream of research on the determinants of successful inorganic modes of internationalization in the form of cross-border acquisitions by emerging market multinationals. It comes to some important insights regarding the asset-seeking behavior of emerging economy multinationals. In fact, the study discovers a U-shaped relationship between absorptive capacity of Indian acquirers and their cumulative abnormal return after acquisitions in Europe. Therefore, these results suggest that firms with lower absorptive capacity are believed to benefit from the acquisition of technologically advanced targets as a way to fill their technological gap by accessing the knowledge base of the target, while firms with extensive absorptive capacity have the highest cumulative abnormal return as they should be able to exploit and explore these acquisitions in developed economies.

Through its analysis, this study informs the current academic debate about firm-specific advantages and the internationalization of emerging market firms. In essence, it indicates that absorptive capacity is not always necessary to create shareholder value from developed market acquisitions, meaning that firms that lack research capacity can try to access the knowledge base of their target companies without a need for integration. As such, not all strategic-asset seeking acquisitions by emerging market firms that are being observed lately should be seen as a way for these firms of augmenting existing research capacity. Yet, firms with extensive absorptive capacity seem to be able to benefit most from these type of strategic factor market acquisitions.

#### 5.1. Managerial implications

Given that more and more firms from India and other emerging markets are taking over existing firms in developed economies such as Europe and the U.S. (Accenture, 2008; Williamson, Ramamurti, Fleury, & Fleury, 2013), our results have some interesting managerial implications as well. First, the short-term financial implications for emerging market firms of CBA in developed markets are that absorptive capacity is an important driver of stock market response. Companies at both ends of the spectrum in terms of absorptive capacity seem to respond better than those in the middle of the pack. As such, our results support the acquisition strategy for emerging market firms that want to benefit from merely exploiting the access they get to strategic factor market targets, on the one hand, while realizing that Indian companies with a track record of extensive absorptive capacity themselves can gain most from their cross border acquisitions. However, for most firms in the middle of the pack, our results indicate that they need to clarify their strategy better when acquiring firms in developed economies, since they realize the lowest financial return.

Furthermore, the results indicate that it is better for standalone firms to carry out a horizontal acquisition. Research has indicated that acquirers which perform R&D in the same general areas as a target firm can overcome information asymmetries that hinder integration of technology resources. This is clearly more relevant for stand-alone firms than for business-group companies that can draw from a wider knowledge base given that horizontal acquisitions for business group companies are deemed less interesting than vertical or unrelated acquisitions where the opportunities for exploration are more extensive (Rabbiosi et al., 2012; Khanna & Palepu, 2000; Lee & Caves, 1998).

Firms that lack absorptive capacity can stick to exploiting the acquired knowledge. This seems to be in line with anecdotal evidence that suggests that emerging market firms that acquire target companies in developed economies run these companies rather autonomously, which can also be a potentially interesting approach for the managers of Western companies. Chittoor and Jena (2013) find, for instance, that the majority of Indian acquisitions are not integrated into the parent company, with the acquired firm maintaining a high degree of organizational and

managerial autonomy (Kale, Singh, & Raman, 2009). This approach also allows for multiple, simultaneous and sequential acquisitions, which seems rather challenging when there is a real need for post-acquisition integrating and augmenting knowledge bases (Grant & Baden-Fuller, 2004).

#### 5.2. Limitations and future research

As always, our study obviously has its shortcomings. One of the limitations to this approach is that although evidence is given that knowledge as measured by research and development intensity of the acquirer may lead to value creation in a CBA, it is not clear from this methodology how this knowledge is actually leveraged or combined. It should be clear that one of the challenges in the strategic literature on the determinants of value creation through CBAs is a measurement issue to specify better the resources and capabilities that are transferred through a CBA. To do this, it needs to be measured to what an extent there is an opportunity to share knowledge, a motivation to share knowledge and an ability to do so. This should be better investigated using a behavioral methodology and survey evidence. Further research could go beyond the characteristics of successful emerging market firms and try to identify the way in which the exploitation and exploration of knowledge needs to be organized, by giving leeway to the acquired affiliates or by centralizing the process of the transfer of innovative capabilities from the affiliate to the acquirer.

Given that the empirical context of our study was limited to European acquisitions by Indian acquirers, it would also be interesting to see whether the findings are similar to the experiences of cross-border acquisitions made by other innovative emerging market firms from countries such as China or the newly industrialized economies.

Some technical issues are also important. Given that we use cumulative abnormal returns, non-listed firms and privately held firms that acquired other companies are not included in our sample as well as firms that were only listed after the acquisition announcement. A further limitation is that the CAR methodology assumes a semi-strong-form efficient market. Although we realize that this assumption focuses on short term adaptation, the cumulative abnormal return vis-à-vis the average return on the stock market is still broadly used as a performance measurement in financial studies. We used a 21-day window, but some studies have used shorter window, up to only 2 days. Our robustness checks with alternative clean period windows did not influence our findings. In this respect, we have chosen the most cautious approach as statistical results improve for shorter windows, given that previous research has shown that stock markets tend to overreact the shorter the time window. Besides, short term windows of analysis guarantee the absence of interference by later events, such as subsequent acquisitions.

# Appendix A. The calculation of the cumulative abnormal return

The actual return for the shares of the 147 acquiring Indian companies and the SENSEX Index is calculated by dividing the share value of the current day over the share value of the previous trading minus 1 for each firm j in the clean period and event period. In a second step, the *predicted return* is calculated for each day t in the event period and for each firm j, as shown by the following formula.

$$\hat{R}_{jt} = \hat{\alpha}_j + \hat{\beta}_i R_{mt}$$

The parameters  $\hat{\alpha}_j$  and  $\hat{\beta}_j$  are estimated by regressing the excess stock returns on the excess market return for the estimated period.

The predicted return  $\hat{R}_{it}$  is the return you would expect when the event (the acquisition) would not occur. The benchmark model we used was the market model to calculate this return. It is the most widely used method and takes into account the riskiness of the firm with respect to the market. The calculations involved a clean period of 101 trading days prior to the announcement day and the procedure involved a regression of the firm's return series against the market index SENSEX of the Bombay Stock Exchange. The clean period of 101 days includes all the days on which no information related to the event is announced. The regression of the firms against the actual return of the market index SENSEX for the period -111 to -10 (clean period) produces the  $\alpha$  and  $\beta$  to calculate the predicted return. The  $\alpha$  measures the mean return over the period not explained by the market, while the  $\beta$  measures the sensitivity of the firm *j* to the market and is therefore a measure of risk. The R is the return on the market index for the actual day in the event period.

Next, the *residual or abnormal return* for each day t and each firm j is calculated, defined as the actual return for that day for the firm minus the predicted return:

$$r_{jt} = R_{jt} + \hat{R}_{jt}$$

where  $R_{jt}$  is the actual return and  $\hat{R}_{jt}$  is the expected return on the stock. For each day, these residual returns were then averaged across all the companies in order to produce the average residual for that day, AR(t) (= abnormal return), with the following formula:

$$AR_t = \frac{\sum_j R_{jt}}{N}$$

With *R* being the residual of the bidder firms and *N* the amount of bidders. When the outcome is positive, the market feels on average that there is value creation. In case of a negative abnormal return, there is a negative effect of the market on the event.

During the last step, the average residual for each day over the entire window period of 21 days (-10 days, day 0 (= announcement day), +10 days) is calculated, this in order to produce the cumulative abnormal return (CAR) the cumulated average residual or return for each Indian company. This represents the average total effect of the event for every firm over a specified time interval with the AR being the abnormal return of the bidder firms.

$$CAR = \sum_{t=-10}^{10} AR_t$$

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