International Acquisition and Competitiveness

Jongmoo Jay Choi and Omer Genc

Abstract

International competitiveness is a major national policy issue, but little work has been done on a firm level. We examine whether a firmôs international competitiveness is assisted by international acquisitions using a comprehensive sample of international acquisitions by US firms. Consistent with resource theory but not agency theory, we find that international acquisitions enhance the competitiveness of acquirers compared to a control sample of no acquisition. The resources and capabilities of acquirers and their complementarity with those of target firms are important for the success of international acquisitions. The results are robust with regard to different measures of competitiveness and benchmarks as well as the endogeneity of acquisition decisions. These results help resolve the apparent M&A paradox concerning value destruction.

Keywords: International mergers and acquisitions, international competitiveness, firm resources and capabilities, international corporate investment

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J. Choi is from Temple University, Fox School of Business, Philadelphia, PA 19422. Email: jjchoi@temple.edu; Voice: 1-215-204-5084. O. Genc is from Abdullah Gul University, Kayseri, Turkey 38039. E-mail: gencomerfaruk@gmail.com; Voice: 9-0506-142-5152.

INTRODUCTION

International competitiveness is often viewed as an important national policy issue.[1] Pitelis (2009) defines competitiveness as ñthe ability of an economic entity to outperform its ópeerô group, in terms of a shared objective.ò Most of the studies examined this notion at the country level (e.g., ñthe national diamondò of Porter, 1990). However, as Porter (1998) notes, ñit is the firms, not nations, which compete in international markets.ò Developing appropriate strategies for a firm is important not only for its own performance but also relative to its competitors. One of these strategies involves the organizational choice decisions by companies, including international mergers and acquisitions (M&As). According to a report by United Nations Conference on Trade and Development (UNCTAD, 2008), M&A activities peaked in 2007, with more than 45,000 transactions at a total value of almost 5.5 trillion U.S. dollars. Almost half (47%) of all M&As were international deals in 2007, and a lionôs share of foreign direct investment (FDI) throughout the world was conducted via international acquisitions. In this paper, we examine how the international acquisitions affect international competitiveness of U.S. firms.

There are several reasons for examining international acquisitions (IAs) in the context of competitiveness. First, acquisitions are strategic actions that directly affect a companyôs competitive position relative to competitors. Companies take rivals into consideration when they develop their acquisition strategies. They weigh the value of an acquisition for outperforming the

[1] See, for instance, the speech by President Barrack Obama on, September 16, 2011: ñWe have to do everything we can to encourage the entrepreneurial spirit, wherever we find it. We should be helping American companies compete and sell their products all over the world. We should be making it easier and faster to turn new ideas into new jobs and new businesses. And we should knock down any barriers that stand in the way. Because if weôre going to create jobs now and in the future, we're going to have to out-build and out-educate and out-innovate every other country on Earth." (http://www.whitehouse.gov/issues/technology)

rivals by using acquisition as a response to competitorsô actions or as a pre-emptive move in anticipation of a competitorôs action. Thus one of the key attributes of competitiveness is benchmarking, which is conducted as assessing a firmôs competitiveness *relative to* competitors. This contrasts with the performance study that examines firm outcomes on a stand-alone basis. Second, acquisition is a major strategic corporate decision, with complex, multi-dimensional implications (Ambastha and Momaya, 2004), which influences the success and failure of the firm in a material way. This is even more so for IAs. Third, compared to performance, which assesses how the company performs for each period, competitiveness is more related to a longer-term position relative to rivals. In one of the few studies that look at rivalsô reactions to acquisitions, Akdogu (2009) find negative market returns for rivals in response to acquisitions, which lends support to this competitiveness view of acquisitions. Fourth, as will be argued below, the evidence on international competitiveness helps resolve the apparent M&A paradox regarding value destruction.

There is a large body of work in the M&A literature addressing antecedents, outcomes, success factors, and other issues. Evidence about the value of M&As, however, is largely negative: the market value of acquirers generally deteriorates following domestic acquisitions (e.g., Spyrou and Siougle, 2007; Billet and Qian, 2008; Agrawal, Jaffe, and Mandelker, 1992). In this literature, the poor M&A performance is usually ascribed to managerial agency problems such as CEO overconfidence or hubris.[2] In sum, the evidence about the outcomes of acquisitions is negative or inconclusive (Cartwright and Schoenberg, 2006), or poorly understood (Rotting, 2009). The apparent paradox is that, given such negative evidence on post-merger returns, why firms continue to engage in M&As. King *et al.,* (2004, p.188), in their meta-analysis, state that

[2] Some find a positive valuation impact of M&As due to synergy (Chari, Ouimet, and Tesar, 2010; Fuller, Netter, and Stegemoller, 2002), but they are more of an exception than the rule.

ñchanges to both M&A theory and research methods may be needed.ò In this study, we attempt to help fill this gap by examining the competitiveness outcomes of international acquisitions by U.S. firms.

According to the resource-based view (RBV), having appropriate resources and capabilities is the main source of competitive advantage (Newbert, 2007; Barney, 2001; Barney, 1991). International acquisitions (IA) can provide resources that companies need and which they have difficulty developing themselves or obtaining through market transactions. Knowledge about local markets, networks of suppliers and customers, ties to political players, and technological know-how are some of the resources and capabilities that IAs can provide to companies, which in turn can enhance competitiveness of the acquiring firm. IAs can also benefit acquirers in terms of location-specific advantages, such as accessing factors that may be abundant in the local market, being closer to target customers, and so forth. This is on top of other benefits of acquisitions such as market discipline, synergy through operation and finance.[3] On the whole, the RBV suggests that IAs enhance the competitiveness of acquirers.

There is an alternative view about IAs, however. According to agency theory (Jensen, 1986; Jensen and Mackling, 1976), CEOs may pursue their personal interests or ego that conflict with those of shareholders, and IAs can be an instrument of doing that. Some such as Bartlett and Ghoshal (1991) and Kogut and Zander (1993) argue that corporate executives use M&As to build international empires. Another negative view about IAs concerns post-acquisition integration problems. Since the acquiring and target firms are subject to different cultural and institutional norms and constraints, these environmental or institutional differences can increase

[3] Acquisitions can be viewed as a tool of market discipline for poor managers. Acquirers target mismanaged firms sitting on good assets, and the performance of the acquired firms can increase as a result of replacing local management or injecting better management skills. Acquisitions create synergies at the operational and financial levels as well, via combined purchase savings, economies of scale and scope, lower cost of capital, etc.

transaction costs (Reuer, Shenkar, and Ragozzino, 2004; Datta and Puia, 1995; Markides and Ittner, 1994) and impede the realization of synergies in the integration process. Information asymmetry is another factor that inhibits the synergy creation: uncertainty due to information asymmetry makes post-acquisition integration difficult, reducing the likelihood of success in acquisition outcomes.

We tested the competing hypotheses based on resource-based view and agency theory with comprehensive international acquisitions by US firms. The results support RBV in that IAs are shown to have a positive impact on the international competitiveness of companies compared to companies that do not have IAs. Additionally, we found that the positive impact is greater for acquirers with greater intangibles and acquisitions in the same industry. Contrary to our expectations, acquisition experience is found to have a negative impact on post-acquisition competitiveness. The results are robust with respect to different measures of competitiveness as well as the endogeneity issue.

This paper stands at the intersection of research on international M&As and competitiveness, and contributes to both sets of literature in several ways. First, we add to the competitiveness literature by examining the competitiveness impact of IAs, which is an important organizational choice strategy. There has been no systematic research that examines IAs as a determinant of competitiveness. Second, this study also makes contribution to understanding the M&A paradox by examining IAs from the standpoint of competitiveness. The paradox is that companies continue to use M&As even though most studies (e.g., Haleblian, Devers, McNamara , Carpenter, and Davison, 2009; Masulis, Wang and Xie, 2009; Moeller and Schlingemann, 2005) point to a failure rather than success based on market valuation or financial performance for the majority of cases, and attributing all these to managerial ego seems

unsettling. We show that IAs are not necessarily failures when examined from the perspective of competitiveness as they can enhance competitiveness; this provides one answer to the apparent M&A paradox as to why M&As persist despite value destruction of most such deals. Third, our study also contributes to understanding variability in the outcomes of IAs. We show that the resources and capabilities of the acquirer and the complementarity of resources of the acquirer and target are critical to the success of IAs.

The rest of the paper proceeds as follows: The next section contains the theoretical background and literature review, and develops the hypotheses. Then, we discuss the data and the research methodology, followed by the discussion of empirical results. We discuss managerial implications, limitations, and suggestions for future research, and end with concluding remarks.

HYPOTHESIS DEVELOPMENT

The effect of international acquisition on competitiveness of the acquiring firm

There are different views regarding the impact of IAs. According to the RBV, firms engage in acquisitions in order to obtain otherwise non-marketable resources and capabilities (James, 2002). The resources that companies need in different countries, such as knowledge about local markets, networks within that market, etc., are difficult to develop internally. IAs are effective ways to acquire the knowledge and experience necessary to operate in a different environment. IAs also allow firms to get advanced technology (Jones and Lanctot, 2001), to use the loyal customers of a local firm (Duarte and Garcẽa-Canal, 2004), and to leverage the reputation of the acquired firm (Banbury and Mitchell, 1995). All these resources provide the acquirers with novel and effective ways to compete in a marketplace (Budd and Hirmis, 2004).

Another possible outcome of IAs is an increase in innovation. Research and development (R&D) and innovativeness are found to increase after acquisitions (Bertrand, 2009), which are factors crucial to competitiveness. Sevilir and Tian (2012) also find increased innovation after acquisitions in terms of the number of patents. The main driver of enhanced innovativeness is the synergies that are created by IAs. Local companies have technology and opportunities that make them attractive candidates for acquisition. However, they usually have limited financing options. IAs create financial synergies that provide a lower cost of financing for innovative projects due to increased size or better governance (Raj and Uddin, 2013). This enables the acquired entity to explore opportunities and enhance innovativeness. IAs also facilitate the internalization of localized resources and capabilities, which are costly to obtain through market or to develop internally (Gubbi, *et al.*, 2010).[4]

Location-specific advantages also make IAs attractive, especially in terms of productivity, which is crucial to the competitiveness of companies. IAs in countries with abundant factors provide companies with location-specific advantages (Dunning, 1981). Having access to lower-cost factors of production improves the productivity of acquirers and, hence, their competitiveness. According to Dunning (1981), another location-specific advantage is being close to the market served. Some of the effects of this geographical proximity are developing good relations with host government, improving the public image of the firm, and understanding customer needs better, especially in culturally distant markets. IAs enable firms to increase their proximity to markets and enjoy these location-specific advantages. Moreover, IAs

[4] IAs can also help companies develop capabilities that are important for competitiveness. They increase the diversity inside firms, and companies get more experience dealing with diversity after an IA, which increases competitiveness (Cox and Blake, 1991). Staples (2008) finds that IAs result in more international boards, which can constitute a competitive advantage for companies in terms of diversity management capability and internationalization.

assist acquirers to enter new markets faster than other entry modes and involve less risk than Greenfield investments (Datta and Puia, 1995).

Economies of scale and scope are other ways that IAs can improve the productivity of acquirers and hence competitiveness. Acquisitions are used as a way to redeploy assets (Haleblian, *et al.,* 2009), which results in better utilization of assets. For instance, post-acquisition efficiency in labor utilization positively affects productivity (Fraser and Zhang, 2009). Operational synergies are also the source of productivity improvements. One of the drivers of the operational synergies is a decline in costs as a result of joint purchasing and market power. Huyghebaert and Luypaert (2013) show that the benchmark-adjusted ratio of operating costs to sales declines by 1.53 percent following an acquisition. IAs can result in a transfer of resources from less productive firms to more productive firms (Breinlich, 2008), which can enhance productivity.

IAs can enhance the competitiveness as a result of managerial synergies as well. Manneôs (1965) theory of corporate control posits that acquisitions are disciplinary actions that remove ineffective management. Uygur, Meric, and Meric (2013) find evidence for this theory, and show that acquiring firms tend to target mismanaged firms. Managerial synergies can be created as a result of IAs, especially if the acquirerôs managerial skills are superior to the targets (Raj and Uddin, 2013)**.** These skills and capabilities lead to better management of the target firm. On the basis of all these, we hypothesize that IAs have a positive impact on competitiveness.

Hypothesis 1a: International acquisitions enhance the competitiveness of companies.

There is an alternative view based on agency theory, which suggests a negative effect of IAs. Agency theory, one of the dominant theories in finance, argues that CEOsô interests can be in conflict with shareholdersô interests. Subscribers to the agency view posit that CEOs use

acquisitions for their own private benefits at the expense of shareholders. IAs increase size and complexity of the companies, and have potential to increase CEOsô benefits as CEO compensation is positively correlated with the complexity and size of the company. Therefore, IAs can be destructive if CEOs use them for their own benefit at the expense of shareholdersô interests when there are high agency costs. Masulis, *et al.,* (2009) show that, more often than not, managers engage in value-destroying acquisitions. Matta and Beamish (2008) also find that CEOs with more options and an equity stake in the company have less incentive to engage in IAs to protect their own wealth. In some cases, CEOsô interests are aligned with shareholdersô interests, but they overestimate their ability to improve the performance of the target. CEOôs over-confidence can result in value-destroying acquisitions (Malmendier and Tate, 2008).

The post-acquisition integration problem is a challenge that acquirers face, which might prevent the realization of synergies as well. The ółprocess viewôô of M&As (e.g., Haspeslagh and Jemison, 1991; Jemison and Sitkin, 1986) points out that integration capabilities are crucial to the success of M&As. After IAs, people from different cultures and languages work together, and these differences make it more difficult to manage the integration successfully. For instance, work alienation between individuals from the acquirer and the target has a negative effect on technology- and knowledge-sharing (Brannen and Peterson, 2009). This prevents the acquirer from realizing the desired synergies from the IA. Geographic distance also has a negative effect on communications between the acquirer and the target company and on the integration process. Differences in national contexts affect the control of the acquired company after an IA as well. For instance, accounting standards in the host country can prevent the acquirer from conducting effective monitoring. Personal behavioral differences due to national culture can make motivating the employees more difficult as well.

Information asymmetry between the acquirer and the target is another challenge presented by IAs. The target possesses superior information relative to the acquirer, and it is difficult for the acquirer to precisely evaluate the value of the target firm (Akerlof, 1970). This creates a risk of overpayment for the acquirer, in addition to ñexcessive transaction costs, during the due diligence and negotiation processesò (Reuer *et al.,* 2004, p.19). Overpayment or overvaluation of the target leads to lower performance after an acquisition (Lin, Chou, and Cheng, 2011; Fu, Lin, and Officer, 2013). Moreover, differences in accounting practices and disclosure requirements in the host country increase information asymmetry and can prevent the acquirer from obtaining accurate information about the target. This uncertainty lowers the synergy potential and results with lower returns in IAs (e.g., Moeller and Schlingemann, 2005).[5] Building on all these negative aspects of IAs, we develop a competing hypothesis which proposes a negative effect of IAs on competitiveness.

Hypothesis 1b: International acquisitions reduce the competitiveness of companies.

Factors affecting competitiveness outcomes of IAs

Corporate resources are mainly examined in terms of how they affect the likelihood of an acquisition (e.g., Huyghebaert and Luypaert, 2010). In other studies, the focus is on the resources and capabilities of the target, as IAs are used to acquire the valuable resources of target companies (Karim and Mitchell, 2000; Hitt *et al.,* 1998). We believe that the resources and

[5] Acquisitions can also have negative effects that are not directly related to the acquired firm. Sometimes too much time and effort devoted to the integration process may render top management unable to focus on other important decisions and damage the overall performance of the company (Zollo and Meier, 2008). Backlash from local stakeholders can affect IA success negatively. For instance, a company may face informal sanctions by a local government after an IA if the local competitors have power over the government. Restructuring the target company can also create some tension with the host government and result in a negative public image in the host country. Target companies become a part of the acquirer and can be perceived as a foreign company by local consumers. Consumer animosity against the home country of acquirer could also negatively influence the purchasing behavior of local consumers. Fong, Lee and Du (2013) showed that Chinese consumers demonstrate negative attitudes after the acquisition of Chinese firms by foreign acquirers.

capabilities of acquirers are also important in explaining the success of acquisitions in addition to their likelihood. The acquirer should have the necessary resources and capabilities to create desired synergies after acquisitions. Having sufficient resources and capabilities is also necessary for exploiting opportunities in new markets. In one of the few studies that examine the impact of acquirer resources on the success of IAs, Francoeur (2006) found that companies that engaged in IAs could realize efficiency gains and create value if they had high levels of R&D. Similarly, Suh, You, and Kim (2013) show that the innovative capabilities of acquirers positively influence the performance of the acquisition performance. Having a strong brand name is also important for exploiting opportunities. Companies that have invested on advertising and have a global brand name have a higher likelihood of success after an IA, because strong brand name helps a company to be welcomed by consumers and make the integration process faster and easier. The employees of the target will trust the brand name, which eases the process of keeping and using the intellectual assets of the target and, hence, creates synergies. In this study, we want to focus on R&D intensity as a proxy for acquirer resources to see its impact on post-acquisition competitiveness. We posit that companies with a higher level of R&D intensity have a higher likelihood of improving their competitiveness following an IA. We will complement R&D intensity with capital intensity.

Hypothesis 2: International acquisition of a firm enhances its competitiveness with an increase in the proportion of intangible assets of the acquiring firm.

In addition to having resources, firms should have the capability to utilize these resources and create synergies. One example of such a capability is the experience of the firm. Different sorts of experience have been examined, such as acquisition experience (Fowler and Schmidt, 1989), international experience (Markides and Ittner, 1994), and host-country experience (Gaur

and Lu, 2007). In the context of IAs, we believe that acquisition experience is the most relevant. It has been found to increase the likelihood of engaging in an acquisition (Haleblian *et al.,* 2006), and it has the potential to influence the outcome of an IA. However, evidence is mixed regarding the impact of acquisition experience on acquisition success. Aktas, De Bodt, and Roll (2013) suggest that acquirers learn from repetitive acquisitions, which increases the success of acquisitions. However, Ismail and Abdallah (2013) show that the acquirersô returns were not affected by acquisition experience. In some other studies, the relationship between acquisition experience and post-acquisition performance was found to be U-shaped (Haleblian and Finkelstein, 1999), insignificant (Zollo and Singh, 2004), or positive (Bruton, Oviatt, and White, 1994; Fowler and Schmidt, 1989). Due to these mixed results, it is not clear how acquisition experience impacts the success of IAs.

An international acquisition including post-acquisition integration is a complicated process, involving multiple players and stakeholders often with different backgrounds and perspectives. Organizational learning theory suggests that as firms make more IAs, they gain experience, and this increases the chance of success. Knowledge obtained from prior acquisitions help companies to make better decisions in similar situations (Millington and Bayliss, 1997). Companies also learn from their mistakes and failures by codifying the practices and routines that are important in the integration process (Zollo and Singh, 2004). Therefore, acquisition experience enables acquirers to manage the unique characteristics of IAs more effectively (Markides and Ittner, 1994). Building on organizational learning theory, we propose that acquirers come to understand complexities of IA implementation better as a result of learning from their prior failures and successes after acquisitions, and we argue that the acquisition experience of a firm increases the likelihood of the success of an IA.

Hypothesis 3: International acquisition of a firm enhances its competitiveness more, when the acquirer has greater acquisition experience.

The possession of valuable resources by both the acquirer and the target is a necessary but not a sufficient condition for an IA to create a competitive advantage. In order for an acquisition to create synergies these resources should be integrated effectively (Morrow *et al*., 2007; King, Slotegraaf, and Kesner, 2008). The complementarity of resources can be looked at from the standpoint of the fit between organizational cultures of the acquiring and target firms and the similarity of the goals. In this study, we use the relatedness (or similarity) of the parties in the acquisition as a proxy for complementarity. Makri, Hitt, and Lane (2010) document a positive impact of the similarity of the partners on acquisition success in terms of invention outcomes.

A counter-argument is that if the resources of the target and the acquirer are too similar, there will be no benefit from the acquisition. If the firms limit themselves to targets that have similar resources in related acquisitions (Higgins and Rodriguez, 2006; Wolpert, 2002), this may results in redundancies (Zollo and Singh, 2004) or duplication of resources (King, *et al*., 2008). Therefore, it has also been argued that unrelated rather than related acquisitions provide benefits to acquirers. One of these benefits is the diversification of acquiring firm as a result of investing in unrelated businesses. Unrelated acquisitions also provide acquirers with more heterogeneous resources (Anand, Capron, and Mitchell, 2005), which fosters the creation of complementary knowledge and the development of new products (Sorenson and Sorenson, 2001).

Nevertheless we lean on the argument that the complementarity of resources, measured with relatedness, positively influences the success of an IA for several reasons. Business relatedness provides synergistic benefits because the resources of the acquirer and the target may

be specific to industry and require industry know-how. If the acquirer and the target are from different industries, it will be difficult to create synergies, as the resources may not productively complement each other. Relatedness can also be beneficial in terms of operational synergies. If the acquirer and target are from same industry, they can increase their market power through larger production capacity and lower purchasing costs (Gupta and Gerchak, 2002), share resources, and create operational synergies through economies of scale and scope (Raj and Uddin, 2013). In related acquisitions, the acquirer is generally familiar with the business of target, which reduces information asymmetry and the risks associated with it. These increase the chance of success (Chang and Tsai, 2013). Therefore, we propose that relatedness has a positive impact on the success of IAs. A graphical presentation of the antecedents and their effects on the international competitiveness of the acquiring firm is shown in Figure 1.

Hypothesis 4: International acquisition of a firm enhances its competitiveness more when the acquirer and the target are from the same industry.

[Insert Figure 1 here]

DATA AND METHODOLOGY

Data and sample

Our data on acquisition announcements come from the Securities Data Corporation (SDC) Platinum database. Financial data for firms are from the Compustat. Country-level variables came from various public sources, including the World Bank and the IMF. The empirical tests are based on a sample of IAs by U.S. firms that occurred between 1985 and 2007 in 95 countries. The sample covers a 23-year period prior to the onset of recent global financial crisis in 2008-2009 that might have altered the international investment behaviors of US firms materially. After excluding acquisitions that were not completed, or where the target nation was not known, or

where data were missing, we ended with a sample size of 3,514 IAs. As can be seen at Table 1, the U.K. and Canada dominate our dataset as target countries, with 22.2 percent and 16 percent of all US IAs, respectively. By industry, many of the acquisitions took place in the manufacturing industry, at 34.32 percent. The finance, insurance real estate, and construction industries follow the manufacturing industry, with 16.99 percent and 15.09 percent, respectively.

[Insert Table 1 here]

When we look at the distribution of IAs across years (Figure 2), we see that the number of IAs increased between 1985 and 1998, at which point they peaked. The number of IAs then declined until 2003 and started to increase again in 2004 and after. Table 2 provides descriptive statistics including means, standard deviations, and correlations of the variables. No high correlations are noted with an exception of firm size and prior acquisition experience (at 0.50).

[Insert Table 2 here]

[Insert Figure 2 here]

Measurement of variables

Our dependent variable is post-acquisition competitiveness. Competitiveness is a relative concept and the best way to measure it is assessing how company does compare to rivals. Therefore, we used sales growth and market share growth. Both of these variables measure how much each firm is gaining relative to competitors in the industry and relate a firmôs performance directly to that of competitors (Hunt, 1990). We measured these two variables for one, tow and three-years after acquisition.

For independent variables of interest, we use research and development intensity, which is measured as R&D expenditures scaled by total assets, which is a proxy for the resources of the acquirers. We complemented R&D intensity with capital intensity, which is capital expenditures

scaled by total assets. Acquisition experience is used to assess the capabilities of the acquirers, and is measured as the number of acquisitions a firm has engaged since 1985. We also use the complementarity of resources by looking at whether the acquiring and target firms are from the same four-digit industry or not. Such measure of relatedness is widely used in the strategic management literature (Oler, Harrison, and Allen, 2008).

We use various firm-level and host country control variables. Since standard firm-level variables such as firm size and leverage are correlated with acquisition experience (a variable of interest) as seen in Table 2, we include them selectively. As country-level controls, we include the cultural distance, GDP growth rate, tax rate, exchange rate changes, and the corruption index of host country as country-level controls. We used the GLOBE project cultural dimensions (House, *et al*., 2004), which is one of the most recent one, and followed Kogut and Singhôs (1988) methodology to calculate cultural distance. These are also selectively used upon checking correlations. Definitions of these variables are presented in Table 3. To address the endogeneity concerns in the robustness tests, we use 2SLS estimation where the instruments are intangibles, leverage, IPO, credit rating, and CEO age. We discuss these more later. A definition of variables can be found in Table 3.

[Insert Table 3 here]

Data analysis

Since competitiveness is a relative concept, benchmarking an analysis of IA firm sample to a comparable sample is important. A control sample was constructed from a large pool of firms that did not have acquisitions during the sample period, which includes 65,466 firm-year observations. We selected a matching sample of firms from this pool for each IA, without replacement, based on firm size, industry and fiscal year (from January to December). For each

IA, we selected a company from the same industry with the closest size, which had no acquisitions in the same year that the acquisition takes place. Our final control sample contained 2,320 observations. The graphs of the distribution of raw and controlled samples, which is provide in Appendix, coincide very tightly against firm size, indicating the effectiveness of the matching method used in the construction of the control sample. We conducted multivariate analysis to test the hypotheses developed in the previous section.

EMPIRICAL RESULTS

The impact of IA on competitiveness

Our main analysis depends on benchmarking against the matched control sample of no acquisitions. Table 4 tests Hypothesis 1a and 1b in the multivariate context with a sample containing both IA and no-acquisition cases. The results show that the coefficients of the IA dummy are positive and significant in sales and market share growth one year following the acquisition. These results indicate that IAs enhance competitiveness one year following the acquisition. These results support resource-based view that IAs enhance competitiveness of US acquirers (Hypothesis 1a), and is inconsistent with the agency theory or integration problems that causes a negative effect of IAs (Hypothesis 1b). However, the effect seems to be insignificant for two and three years after acquisition. The insignificance of the effect in two and three years is mainly due to noise. There may be other events or factors that affect company in following years.

[Insert Table 4 here]

Factors that affect the success of IAs

The primary explanatory variables contributing to the success of IAs are related to resources and capabilities of the acquirer. These factors are explanatory variables for the post-acquisition competitiveness of IAs in Table 5. Earlier we hypothesized that resources (R&D intensity)

should enhance competitiveness (Hypothesis 2). The results in Table 5 support hypothesis 2. The impact of R&D intensity is positive and significant in three of six models. It is especially important to note that the impact is significant in one-year following the acquisition for both sales growth and market share growth.

Hypothesis 3 is related to firm capability, which is measured by prior acquisition experiences of the acquiring firm. The coefficients of acquisition experience are negative and significant in five out of six models. Companies with higher acquisition experience seem to have lower growth sales and market share. The negative results may be due to the correlation between acquisition experience and firm size as we usually observe larger firms to have more acquisition experience. The growth in sales and market share may be relatively smaller for large firms than smaller firms, due to their size. Thus, we find support for hypothesis 2, which is about resources, but the results contradict the hypothesis 3.

Finally, relatedness is shown to positively affect competitiveness only two-years after acquisition for both sales growth and market share growth. The positive impact suggests that some synergies are created as a result of resource complementariness by virtue of acquiring and target firms being in the same industry. It is important to note that these synergies are realized after two years. The results provide partial support for Hypothesis 4.

[Insert Table 5 here]

As controls, we also examined two country-level variables to see how they impact IA success: cultural distance and growth of GDP. The coefficients of cultural distance are positive but insignificant for all models except model 5. Language and religion were also used as additional measures of cultural distance but the results were not significant (not reported). Finally we checked for the attractiveness of the host country, which was measured by GDP

growth. The coefficients for GDP growth were negative in all models, but significant in models 2 and 5, which are two-years after acquisition. Overall, our evidence suggests that firm-level variables explain some of the variations in the outcomes of IAs, but we do not find support for country-level factors, which serve as controls.

Robustness tests

In the above, we estimated the effect of IAs on competitiveness in a single equation context using non-acquisition cases as controls. In this section, we perform additional test to check the robustness of our results. To address the endogeneity in a firmôs decision on IAs, we use the two-least square (2SLS) with instruments.

We use the 2SLS estimation to alleviate the endogeneity problem. We used intangible intensity, credit rating, IPO activity, and CEO age, as well as an indicator variable as to whether the company has had an IPO or not in last five years, as instruments for the propensity of a company to engage in an IA. In the first stage, we estimated the propensity of companies to engage in an IA, and in the second, we used the predicted score as an IA variable (Table 6). The last three rows of Panel B of Table 7 present the scores for the validity of the 2SLS estimation and instrumental variables. The three tests show that the system is identified and instruments in the first stage estimation are generally valid.[6]

[Insert Table 6 here]

Table 6 presents both the first and the second-stage results regarding the effect of IAs on competitiveness with benchmarking against non-acquisition cases. The results of the first stage

[6] Wald score tests the null hypothesis that the instruments are weak in all of the models in which the null hypothesis is rejected; this implies that our instruments are not weak when the hypothesis is supported. The Sargan score tests the null hypothesis that our instruments are valid and not over-identified. The last method is the Hausman test score, which tests the hypothesis that the endogenous variables are actually exogenous; this hypothesis is rejected, which implies that the results of the 2SLS estimation are robust.

are presented at the second section (Panel B) of the table. With regard to the second stage analyses, consistent with our main result in Table 4, the impact of IAs on competitiveness is positive and significant for four of six models. In general, the earlier results on the effect of IAs on competitiveness carry over and in 2SLS we even have stronger results as the coefficients of IA re significant for two-years after acquisition as well. All in all, we see that IAs have positive impact on the competitiveness of the acquiring firm, and the effects are statistically significant compared to non-acquisition cases.

DISCUSSION

The main purpose of this study is to examine the impact of international acquisition on a firmôs competitiveness. Examining IAs in the context of competitiveness also sheds light on the apparent M&A paradox as to why M&As persist despite largely negative valuation effects of such deals for acquirers. (Ascribing this all to CEO hubris is unsettling.) We examined this phenomenon by comparing companies engaging in IAs with non-acquisition companies and employing control sample methodology. Our results indicate that IAs have a positive impact on competitiveness, compared to firms not engaging in acquisition. However, this effect was significant only for one-year after acquisition and not for second and third years.

Our study draws attention to the importance of benchmarking for M&A research. Appropriate benchmarks should be taken into consideration when assessing the impact of IAs. The findings also have implications for defining the failure or success of IAs. We showed that the resources and capabilities of acquirers are crucial to the success of IAs, and companies should develop these to accomplish a successful IA.

This research has a number of limitations. We used only the public acquirers and excluded unlisted firms for which we could not get sufficient data from Compustat. This may

limit the generalizability of our results to private acquirers. The criteria we used for creating the control sample is based on industry, firm size and year. However, there might be other factors, such as R&D intensity and leverage that affect the success of a company and the probability of its engaging in an acquisition. Although the control sample tightly matches the treatment sample in several measures of exogenous firm characteristics, it is arguable that we could have gotten a better control sample if we had taken additional factors into consideration. However, we alleviated some of the problem by using the two-stage least squares which estimates the propensity of the firm to do acquisitions in the first stage.

Our study opens new and fresh avenues for research in several directions. First, we showed that acquisitions should be assessed from the perspective of competitiveness. Although most of the studies in the literature argue that acquisitions are failures, we found that, in most circumstances, they enhance competitiveness. An acquisition can seem to be a failure based on market response, but it can enhance the competitiveness of companies in terms of market share, sales growth, and so forth. We need to reevaluate the belief that acquisitions are failures necessarily, as we showed that they enhance competitiveness. Our results provided partial support for the impact of intangibles on IA success. Intangibles can be developed in different ways such as patents, advertising, etc. The sources of the intangible assets and their impact on acquisition success would be worth examining for future research. Another lesson of our study is that companies have different motivations for IAs, and the outcomes vary based on these motivations. The best way to determine the success of acquisitions would be to compare the motivations and outcomes, which could contribute significantly to the literature.

CONCLUSION

Despite the increasing importance of competitiveness of firms, most studies examine this notion at the country and industry level using aggregate or macro variables. We draw on studies where micro-level variables have been used to assess competitiveness at the firm level and examine the impact of an important organizational decision, IA, on firm competitiveness. This also sheds light on the frequently asked question of why companies continue to use IAs, although many studies find that they destroy value. Hence, this paper takes a significant step as well toward filling this research gap in the M&A literature in terms of the M&A paradox. Examining IAs in competitiveness context also contributes to a better understanding of the determinants of competitiveness. Our results suggest that IAs increase the competitiveness of a company, in terms of market share and sales growth. In conclusion, this study takes a significant step toward a better understating of IAs although there are still issues that warrant further investigation. We show that international acquisitions of U.S. firms can be viewed as positive in that it enhances international competitiveness of U.S. firms, even though, as shown in existing work, the stand-alone post-acquisition performance can be negative based on market or accounting returns.

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FIGURES & TABLES

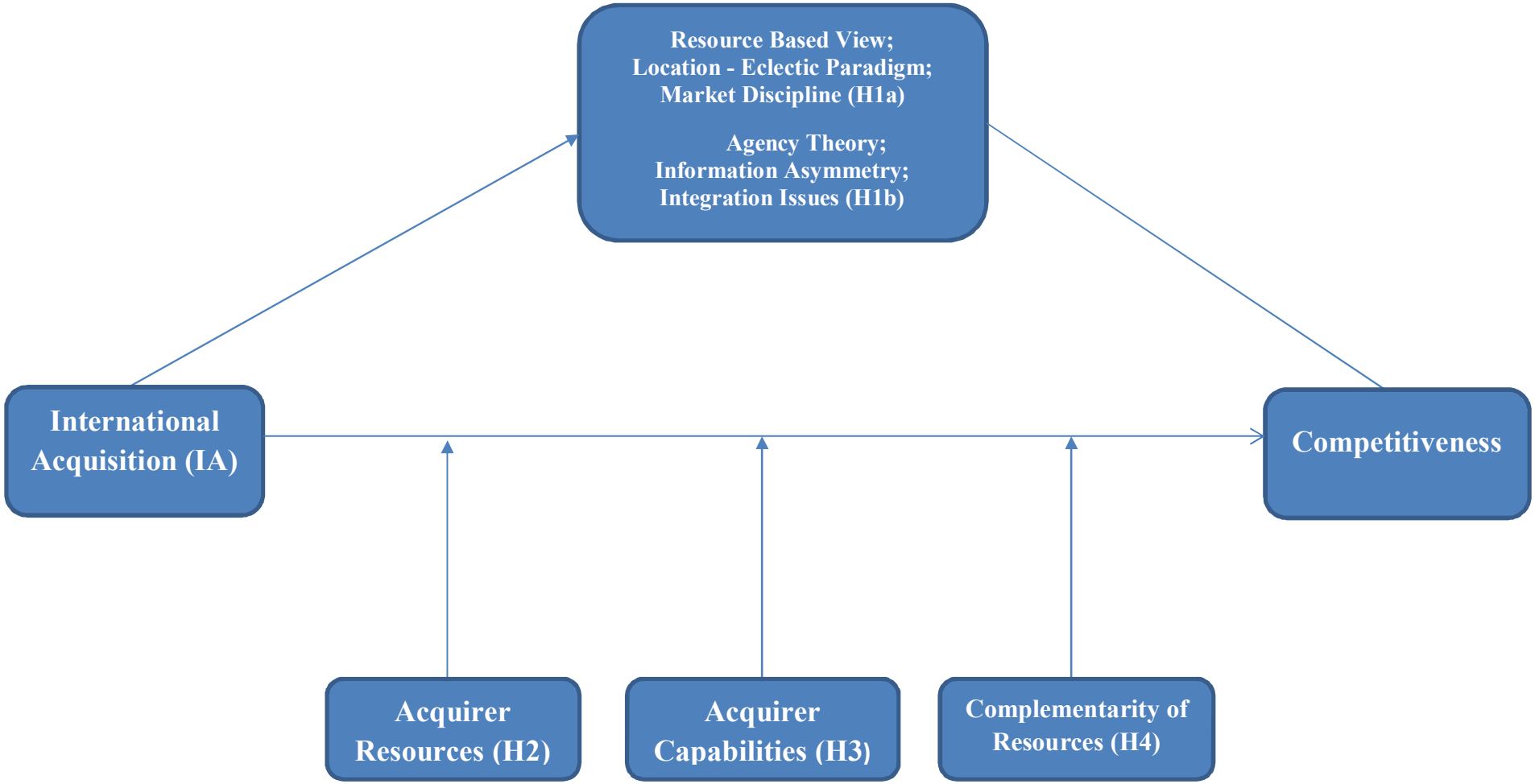


Figure 1: Conceptual framework

Table 1: Number of IAs across target countries and acquirer industries

This table provides the number of IAs across different industries and also the distribution of IAs across target countries.

Target nation / industry	United Kingdom	Canada	Germany	France	Australia	Netherlands	Israel	Sweden	Japan	Mexico	Italy	Switzerland	Brazil	China	Norway	Argentina	Spain	Ireland	Hong Kong	Taiwan	Other	Total
Agriculture, forestry & fishing	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Mining	22	38	7	15	6	4	4	2	0	2	0	6	5	2	1	2	2	1	0	2	28	149
Construction	0	2	1	1	2	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	3	13
Manufacturing	248	221	104	82	62	31	25	28	22	23	21	19	28	19	19	13	11	14	13	11	171	1185
Transportation, communications, electric, gas & sanitary services	35	30	23	14	13	9	6	2	7	4	8	2	0	6	4	4	2	3	4	1	31	208
Wholesale trade	17	23	8	9	8	0	1	1	3	2	0	0	2	1	1	0	1	1	2	1	16	97
Retail trade	6	8	4	2	3	0	0	1	2	0	1	3	0	1	0	3	0	0	0	0	3	37
Finance, insurance & real estate	67	25	16	16	7	11	5	9	6	4	7	6	3	4	2	6	3	4	2	3	26	232
Services	124	76	50	32	12	16	15	13	12	14	12	10	5	9	5	4	9	3	5	8	65	499
Public administration	8	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	14
Total	528	424	215	171	115	71	56	56	52	50	49	46	43	43	33	32	28	28	26	26	344	2436

Table 2: Means, standard deviations, correlations of the variables

	Var	Mean	S. D.	1	2	3	4	5	6	7	8	9	10	11	12
R&D intensity	1	0.08	0.21	1.00											
Capital intensity	2	0.16	0.45	0.44	1.00										
Firm size	3	5.00	2.58	-0.06	0.06	1.00									
Experience	4	1.70	2.38	-0.04	0.00	0.50	1.00								
Relatedness	5	0.22	0.41	0.01	0.02	-0.05	-0.09	1.00							
Cultural distance	6	0.43	0.30	-0.08	-0.01	0.16	-0.02	0.09	1.00						
GDP growth	7	3.13	2.51	0.06	0.04	0.04	0.05	0.06	0.01	1.00					
Intangibles	8	0.07	0.13	0.04	-0.16	-0.03	0.11	-0.04	-0.05	0.06	1.00				
IPO	9	0.16	0.37	0.13	0.22	-0.24	-0.20	0.05	-0.02	-0.04	0.06	1.00			
Credit rating	10	0.15	0.14	0.00	-0.06	-0.12	-0.01	0.12	-0.03	-0.01	-0.03	0.24	1.00		
CEO age	11	54.25	7.64	-0.18	-0.08	0.18	0.03	-0.08	0.01	-0.04	-0.11	-0.19	-0.26	1.00	
Leverage	12	0.60	0.37	-0.23	-0.12	0.37	0.23	0.05	0.12	0.04	-0.03	-0.03	-0.03	0.12	1.00

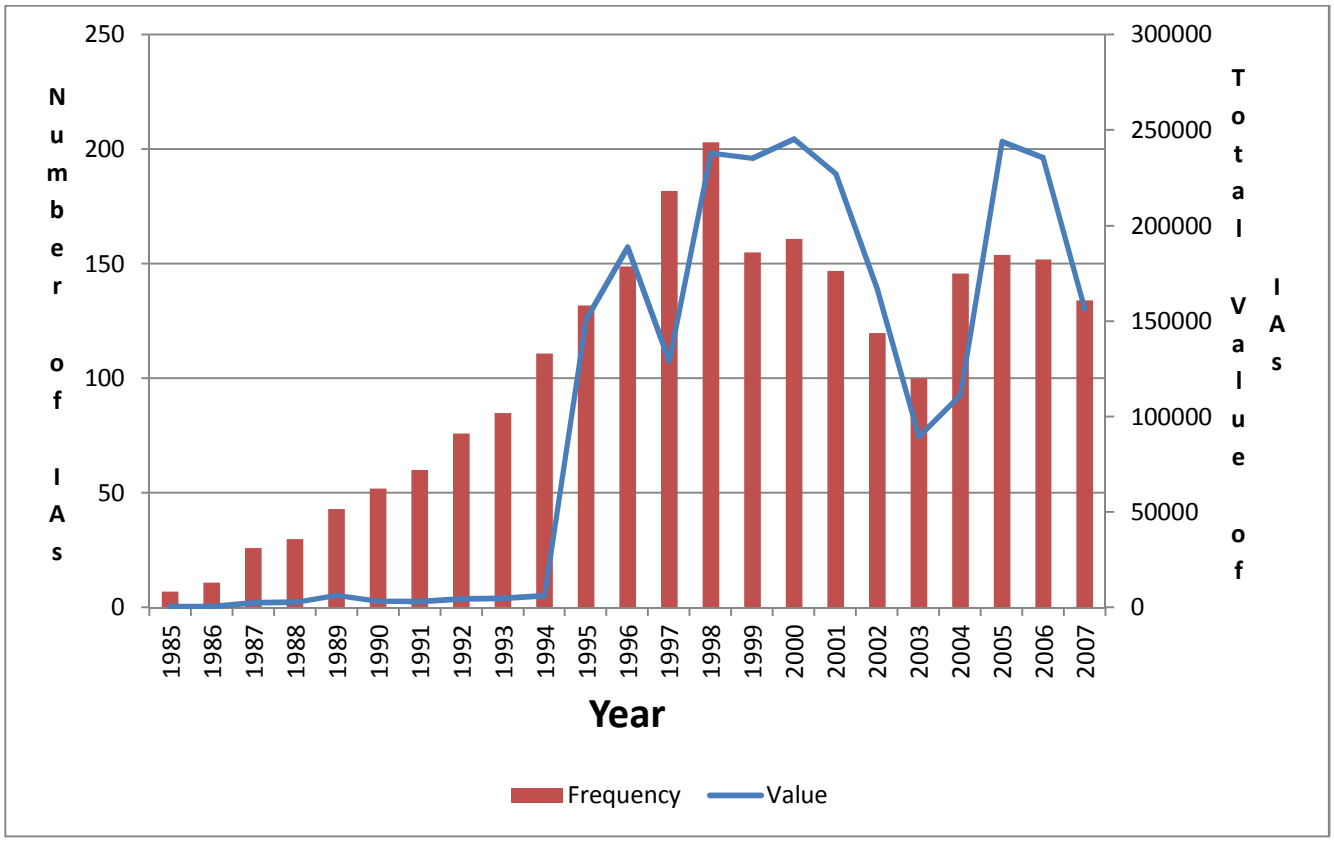


Figure 2: International acquisitions over years
This figure provides descriptive statistic for international acquisitions with regard to frequency and total value over years.

Table 3: Description of variables

Variable	Measurement
Sales growth	Growth in total revenue in $ million. This is measured for one, two, and three-years after acquisition cumulatively.
Market share growth	Growth in market share (firm sales as a percentage of total industry sales). This is measured for one, two, and three-years after acquisition cumulatively.
International acquisition (IA)	An indicator variable which is 1 if the firm has an international acquisitions and 0 if it does not
R&D intensity	Research and development (R&D) expenses scaled by total assets
Experience	Number of acquisitions that the firm has had since 1985
Relatedness	Value of 1 if the acquirer and target are at the same industry at 4-digit level and 0 otherwise
Cultural distance	The cultural distance developed by Kogut and Singh (1988) based on Globe cultural dimensions
GDP growth	Growth in gross domestic product of the host country in the year of acquisition
Capital intensity	Capital expenditures in $ million scaled by total assets
Firm size	Natural log of total assets
Intangibles	Intangibles assets scaled by total assets
CEO age	Age of the CEO at the time of the acquisition
IPO	An indicator variable which is 1 if the firm has an IPO in last 5 years before the acquisition and 0 otherwise
Credit rating	Credit rating of a firmôs debt, as proxied by interest expense divided by total debt

Table 4: Impact of International Acquisitions on Competitiveness

This table reports the results of the following pooled OLS regression: Competitiveness = a + b x IA + c x Controls + residual. It reports the results of combination of IAs and non-acquisition companies (control sample). Competitiveness (sales and market share growth) has been measured for oneôtwo and three-year after acquisition. The key variable of interest is IA, which is a dummy to measure whether the company has an IA or not. Heteroskedasticity-robust standard errors are used. All of the dependent and independent variables are winsorized at 1% level. Year and industry effects are fixed by using dummies. The t-values associated with each coefficient are provided in parentheses. *** , ** , and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	Sales Growth	Sales Growth	Sales Growth	Market Share Growth	Market Share Growth	Market Share Growth
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
	(1)	(2)	(3)	(4)	(5)	(6)
IA	0.05**	0.01	0.11	0.06**	0.12	0.21
	(2.18)	(0.31)	(1.51)	(1.99)	(1.01)	(1.49)
R&D Intensity	0.03	0.36***	0.72**	0.1	0.89*	2.40*
	(0.87)	(2.72)	(2.57)	(1.19)	(1.94)	(1.89)
Capital Intensity	0.56***	0.38	0.01	0.74***	2.32	1.74
	(4.16)	(0.82)	(0.02)	(2.6)	(1.23)	(0.46)
Firm Size	-0.04***	-0.07***	0.09***	-0.04***	-0.04*	-0.02
	(-5.70)	(-4.43)	(-3.85)	(-4.91)	(-1.90)	(-0.43)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.37***	0.89***	1.14***	0.40***	0.44	0.31
	(4.25)	(5.16)	(4.46)	(4.17)	(1.32)	(0.52)
N	1448	1303	1230	1447	1302	1230
Adj. R^2	0.12	0.23	0.17	0.21	0.4	0.45

Table 5: Factors that affect the success of International Acquisitions

This table reports the results for the success factors of IAs. The sample of IAs is used for this analysis. Heteroskedasticity-robust standard errors are used. Dependent variable is the competitiveness of the acquirer one, two, three-years after the acquisition and is measured by sales growth and market share growth. All of the dependent and independent variables are winsorized at 1% level. Year and industry effects are fixed by using dummies. The t-values associated with each coefficient are provided in parentheses. *** , ** , and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	Sales Growth Year 1	Sales Growth Year 2	Sales Growth Year 3	Market Share Growth Year 1	Market Share Growth Year 2	Market Share Growth Year 3
	(1)	(2)	(3)	(4)	(5)	(6)
R&D Intensity	0.14*	0.25	1.01***	0.39**	0.71	2.81
	(1.7)	(1.57)	(2.73)	(2.15)	(1.21)	(1.56)
Experience	-0.01***	-0.02***	-0.04***	-0.01**	-0.02*	-0.01
	(-3.03)	(-2.72)	(-2.91)	(-2.53)	(-1.71)	(-0.67)
Same Industry	0.03	0.21**	0.08	0.07	0.45**	0.27
	(0.84)	(1.99)	(0.59)	(1.31)	(2.17)	(1.31)
Capital Intensity	0.39	0.99	-0.74	0.12	6.32	2.13
	(1.11)	(0.92)	(-0.43)	(0.17)	(1.1)	(0.24)
Cultural Distance	0.06	0.20	0.06	0.04	0.46*	0.22
	(0.67)	(1.25)	(0.35)	(0.55)	(1.79)	(1.01)
GDP Growth	-0.009	-0.03**	-0.02	-0.01	-0.05**	-0.05
	(-1.41)	(-2.48)	(-1.02)	(-1.53)	(-2.42)	(-1.62)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.18*	0.03	0.10	0.18	-0.52	-0.27
	(1.88)	(0.19)	(0.53)	(1.61)	(-1.16)	(-0.71)
N	691	615	577	690	614	577
Adj. R^2	0.167	0.172	0.293	0.322	0.479	0.569

Table 6: Impact of IA on competitiveness: two-stage least squares

This table reports the results of the following 2SLS regression: Competitiveness = a + b x IA + c x Controls + residual. Year and industry effects are fixed by using dummies. In the first stage, the propensity for a firm to undertake international acquisitions (IA) is estimated as a function of intangibles, credit rating, and IPO activity of the company, and age of CEO, and in the second stage, the predicted IA values are used as an independent variable in estimating its effect on competitiveness. The main analysis (second stage) is presented at Panel A and the results of the first stage can be found at Panel B. The statistics about the validity of instruments are reported at last three rows of the table. ∗∗∗ , ∗∗ , and ∗ represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: The effect of international acquisitions on Competitiveness (second stage)

	Sales Growth Year 1	Sales Growth Year 2	Sales Growth Year 3	Market Share Growth Year 1	Market Share Growth Year 2	Market Share Growth Year 3
	(1)	(2)	(3)	(4)	(5)	(6)
IA (Predicted)	0.55***	1.52***	1.55*	0.84***	3.55*	2.82
	(3.03)	(2.75)	(1.74)	(2.59)	(1.71)	(0.89)
R&D intensity	0.18*	0.60***	1.24***	0.55	3.25	5.53
	(1.68)	(3.87)	(3.52)	(1.46)	(1.43)	(1.51)
Capital intensity	0.76*	2.46***	1.89	1.62	14.23	12.83
	(1.67)	(3.36)	(1.35)	(1.52)	(1.48)	(1.21)
Firm Size	-0.06***	-0.16***	-0.22***	-0.06***	-0.20***	-0.23***
	(-5.99)	(-5.22)	(-4.17)	(-5.03)	(-2.76)	(-3.14)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.56***	1.35***	2.19***	0.62***	1.46**	2.32***
	(5.56)	(4.60)	(4.18)	(4.87)	(2.34)	(4.45)
N	2723	2512	2380	2723	2512	2380
Adj- R^2	0.01	0.02	0.14	0.17	0.21	0.25

Table 7: Impact of IA on competitiveness: two-stage least squares – cont.

Panel B: The propensity to undertake international acquisitions (first stage)

	Sales Growth	Sales Growth	Sales Growth	Market Share Growth	Market Share Growth	Market Share Growth
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
	(1)	(2)	(3)	(4)	(5)	(6)
Intangibles	0.29***	0.23***	0.26***	0.29***	0.23***	0.23***
	(4.97)	(4.01)	(4.33)	(4.97)	(4.01)	(4.01)
IPO	-0.002	0.02	-0.002	-0.002	0.01	-0.04**
	(-0.11)	(0.58)	(-0.09)	(-0.11)	(0.58)	(-2.40)
Credit rating	0.0002	0.0001	-0.0002	0.0002	0.0001	-0.0005
	(0.31)	(0.15)	(-0.58)	(0.31)	(0.15)	(-1.51)
CEO age	-0.002**	-0.002**	-0.002**	-0.002**	-0.002**	-0.001
	(-2.48)	(-1.97)	(-2.10)	(-2.48)	(-1.97)	(-1.32)
Wald[a]	7.75***	5.10***	6.01***	7.75***	5.10***	10.25***
Sargan[b]	18.43***	16.48***	16.23***	2.38	2.34	4.11
Hausman[c]	9.19***	9.53***	3.12*	6.89***	3.26*	0.81
N	2723	2512	2380	2723	2512	2380
Adj- R^2	0.06	0.07	0.06	0.06	0.0	0.03

a. Walt score tests the null hypothesis that instruments are weak (joint significance of all of the instruments)

b. Sargan score tests the null hypothesis that our instruments are valid and they are not overidentified (chi2 scores are provided)

c. Hausman score tests the hypothesis that the endogenous variables are actually exogenous (F-values are provided)

APPENDICES

Appendix A: Construction of Control Sample

	IA	All companies
Main samples	4,825	165,466
A company can have two acquisitions in a year. We include only one acquisition per year and duplicates are excluded in both samples	4,011	165,466
Some companies appear in both samples as the full sample contains all firms. We exclude the companies that have engaged in either IA or domestic acquisition from the full sample. Now the full sample contains only the companies that have no acquisition. Companies that have domestic acquisition are also excluded from the main sample and main sample now contains companies with only IA	2,506	151,761
Matching gave us a control sample of 2,445 observations	2,445	2,445
Some of the companies are assigned twice as a control company in the same year, which creates repetition. We excluded these observations from both samples.	2,320	2,320

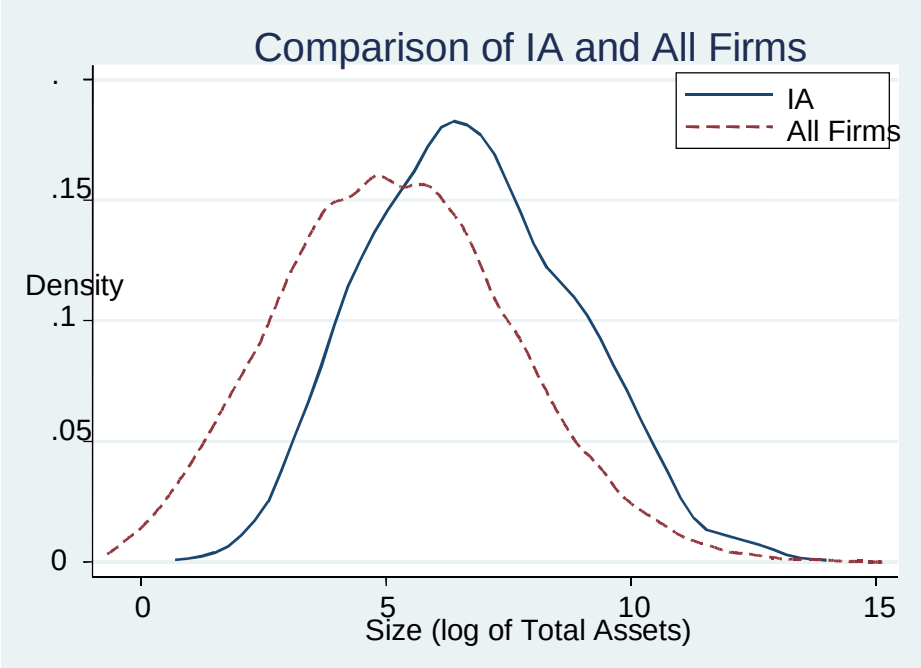
Appendix B: Descriptive Statistics for IA and Control Sample

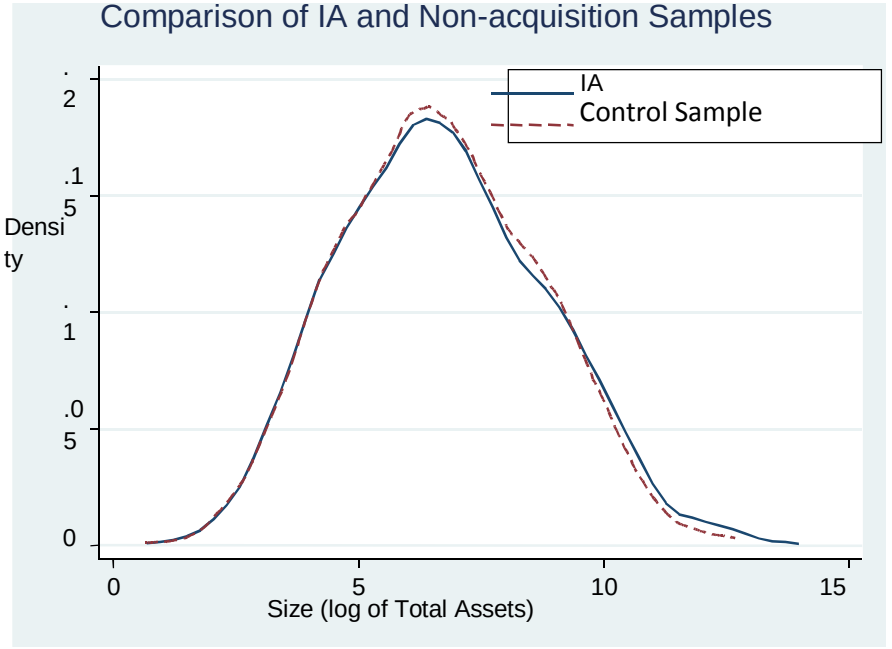
This table provides the summary statistics for IA and control sample. The table contains the descriptive statistics for IA and non-acquisition sample (control) respectively. The values below the difference in parentheses are the associated t-values of the difference test for mean and Pearson chi2 value for equality of median test.

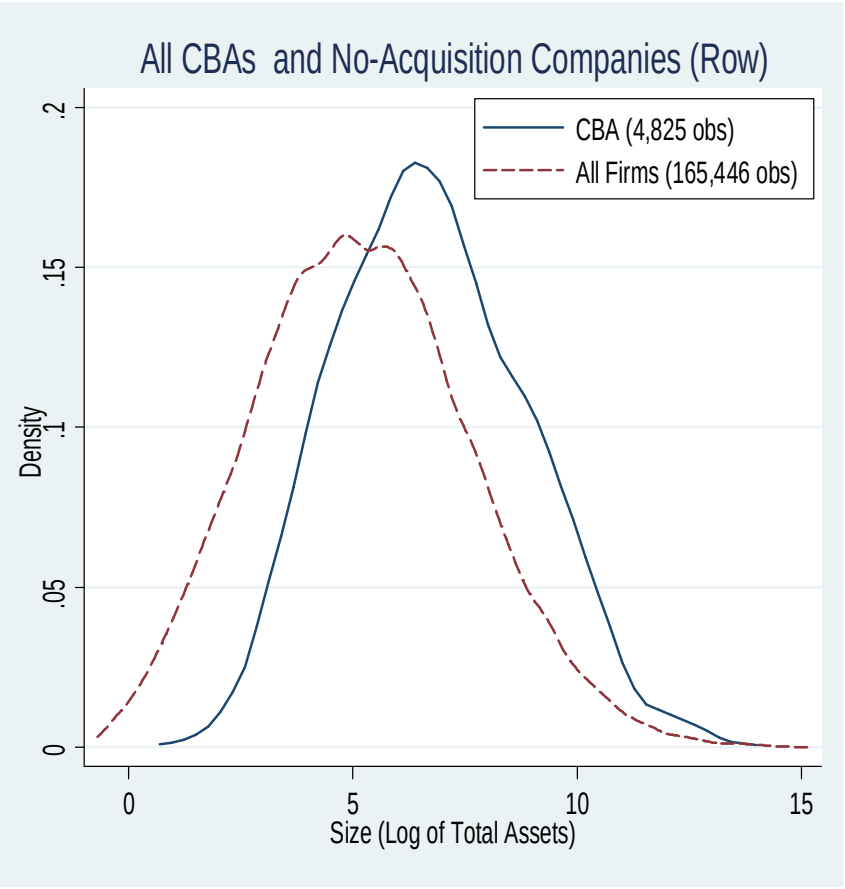
	Mean			**Median**		
Variable	**IA**	**Control**	**Difference**	**IA**	**Control**	**Difference**
Total Assets	8148	5748.7	2176**	716	694	22
	(716)	(21130)	(2.4)			(0.83)
R&D Expense	263	359.6	-96.7**	23.0	23	-0.41
	(23)	(1102)	(-2.2)			(0.95)
Intangibles	1355	892.7	461.8**	83.60	30.1	53.50
	(83)	(5107)	(2.0)			(0.00)
Leverage	0.51	0.17	0.00	0.53	0.51	0.01
	(0.20)	(0.17)	(-0.25)			(0.29)
Profitability	-0.08	-0.04	-0.03	0.05	0.04	0.00
	(0.64)	(0.55)	(-1.60)			(0.19)

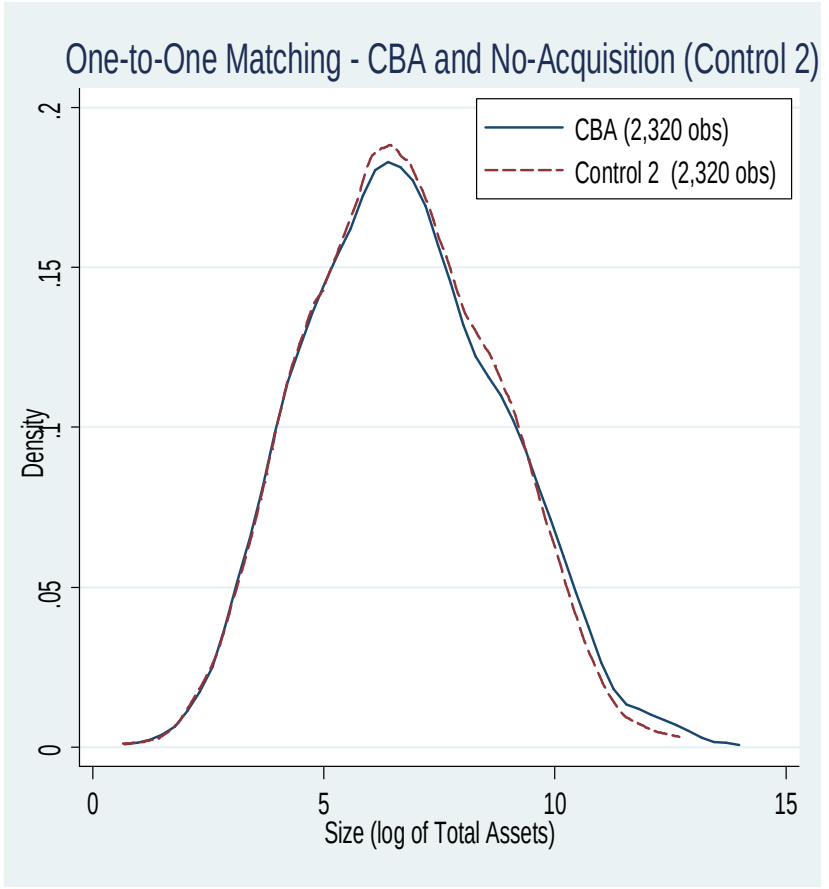
Appendix C: Size Distribution IA (Treatment) and Non- Acquisition (Control) Samples Before and After Matching

The figures provide the distribution of companies in terms of size. First figure is the comparison of main sample (IA) and the sample of all non-acquisition firms. The second figure is the comparison of IA and the control sample that derived from non-acquisition firms (control sample). These figures show how closer are control sample to treatment sample compared to the full samples before matching.






All CBAs and No-Acquisition Companies (Row)
CBA (4,825 obs)
All Firms (165,446 obs)
Density
0
.05
.1
.15
.2
0
5
10
15
Size (Log of Total Assets)


One-to-One Matching - CBA and No-Acquisition (Control 2)
CBA (2,320 obs)
Control 2 (2,320 obs)
Density
0
.05
.1
.15
.2
0
5
10
15
Size (log of Total Assets)