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Journal of World Business

journal homepage: www.elsevier.com/locate/jwb

Cross-listing and the scope of the firm[☆]

Mike W. Peng^{a,*}, Weichieh Su^{b,1}

^a University of Texas at Dallas, Jindal School of Management, 800 West Campbell, SM 43, Richardson, TX 75080, United States

^b National Chengchi University, College of Commerce, Department of International Business, 64 Sec 2 Zhinan Rd, Taipei, 11605, Taiwan

ARTICLE INFO

Keywords:

Cross-listing
Product scope
Geographic scope
Institutions
Emerging economies

ABSTRACT

“What determines the scope of the firm?” is one of the most fundamental questions in strategic management and international business. Yet no previous research has investigated the relationship between the scope of the firm and cross-listing—a firm listing its stock on overseas exchanges. We leverage the resource-based and institution-based views with a focus on cross-listed firms from emerging economies. We predict that cross-listing may result in a narrower product scope in the short run, a wider product scope in the long run, an expanded geographic scope overall, and a higher propensity to engage in mergers and acquisitions in the host country.

Published by Elsevier Inc.

1. Introduction

“What determines the scope of the firm?” is one of the most fundamental questions in strategic management and international business (IB) (Hoskisson & Hitt, 1994; Lee, Peng, & Lee, 2008; Peng, Lee, & Wang, 2005; Rumelt, Schendel, & Teece, 1994). While research on the scope of the firm started with a focus on product scope, more recent work has called for taking into account of both product scope and geographic scope of the firm (Delios & Beamish, 1999; Geringer, Tallman, & Olsen, 2000; Hitt, Hoskisson, & Kim, 1997; Hutzschenreuter & Grone, 2009; Kumar, 2009; Peng & Delios, 2006). While over three decades of research since Rumelt (1974) has shed considerable light on the scope of the firm (Palich, Cardinal, & Miller, 2000), no previous work has investigated the relationship between the scope of the firm and an important new phenomenon associated with globalization that we believe has significant ramifications for the scope of the firm—cross-listing.

Cross-listing refers to the situation whereby a firm lists its stock on an overseas exchange (Karolyi, 2006; Peng & Blevins, 2012; Shi, Magnan, & Kim, 2012). Over 3000 foreign firms have secondarily listed on over 40 major stock exchanges (Karolyi, 2010, p. 1). New York Stock Exchange (NYSE), NASDAQ, London Stock Exchange,

and London's Alternative Investment Market (AIM) have attracted significant cross-listings. In addition, NYSE Euronext (Europe), Deutsche Börse, Hong Kong, and Singapore have all become popular destinations for cross-listed firms. According to the Citi depositary receipts market analysis, trading volumes were up by 22.4 billion shares in 2011 to reach 170.7 billion shares compared to 148.3 billion shares in 2010. Dominated by firms from BRIC countries (Brazil, Russia, India, and China), capital raised by cross-listed firms totaled \$16.6 billion.²

Not surprisingly, finance researchers have paid a great deal of attention to cross-listing. Their work has focused on (1) cost of capital and (2) corporate governance. First, cross-listing is viewed as a way to benefit from a lower cost of capital because firm shares are available to a wider group of global investors (as opposed to a smaller group of domestic investors) (Hail & Leuz, 2009). Second, cross-listing is a commitment to the (typically higher) corporate governance standards of the overseas exchange (Coffee, 1999; Stulz, 1999). Known as the “bonding hypothesis,” the second area of research, which focuses on corporate governance, has particular ramifications for firms from emerging economies (EE) that cross-list in developed economies (DE) (Vaaler & Zhang, 2011).

Despite the growth in cross-listing and in finance research on cross-listing, a leading contributor reveals that “we, as researchers, still have only a preliminary understanding of the real economic consequences of their [cross-listed firms'] growth” (Karolyi, 2006, p. 144). Echoing this sentiment, we argue that cross-listing is not merely a financial or corporate governance decision. Specifically,

[☆] An earlier version of this article was presented at the Academy of Management (Montreal, August 2010). This research was supported in part by the Jindal Chair at UT Dallas. We thank Dane Blevins, Susan Feinberg, Seung-Hyun Lee, Brian Pinkham, Steve Sauerwald, Jordan Siegel, Evis Sinani, John Slocum (editor), Weiqiang Tan, Eric Tsang, Paul Vaaler, Crystal Zhuang, and two reviewers for helpful discussions and comments.

* Corresponding author. Tel.: +1 972 883 2714; fax: +1 972 883 6029.

E-mail addresses: mikepeng@utdallas.edu (M.W. Peng),

weichieh@nccu.edu.tw (W. Su).

URL: <http://www.mikepeng.com>

¹ Tel.: +886 2 2939 8033; fax: +886 2 2938 7699.

² See the 2011 annual report of Citi Depositary Receipts Services. The top five four value movers are Baidu (China), Vale (Brazil), Petrobras (Brazil), and Gazprom (Russia).

Table 1

The percentage of cross-listed firms from the top 10 countries among all cross-listed firms on the U.S. and U.K. financial markets.

Rank	The U.S. markets in 2000		The U.S. markets in 2011		The U.K. markets in 2000		The U.K. markets in 2011	
1	U.K.	12%	China	30%	India	25%	Russia	26%
2	Brazil	9%	U.K.	11%	Poland	13%	India	17%
3	Japan	9%	Brazil	8%	Taiwan	11%	Taiwan	8%
4	Mexico	7%	Japan	5%	Russia	9%	Egypt	6%
5	China	6%	Mexico	5%	Egypt	7%	Korea	6%
6	Chile	5%	Argentina	3%	Lebanon	5%	Poland	5%
7	Netherlands	5%	India	3%	Turkey	3%	Kazakhstan	5%
8	Argentina	4%	Chile	2%	Lithuania	3%	Lebanon	3%
9	Ireland	4%	France	2%	Korea	3%	Bahrain	2%
10	France	4%	Netherlands	2%	Hungary	3%	Pakistan	2%

Sources: Citibank Universal Issuance Guide. The percentage indicates the proportion of focal foreign firms to total foreign firms. The U.S. markets refer to the American Stock Exchange (AMEX), New York Stock Exchange (NYSE), and NASDAQ. The U.K. markets refer to the London Stock Exchange (LSE), Alternative Investment Market (AIM), and Stock Exchange Automated Quotation System (SEAQ).

cross-listing is a major strategic decision concerning the growth of the firm. Such growth is likely to have important consequences on both product scope and geographic scope of the firm (Hasan, Kobeissi, & Wang, 2011; Peng & Delios, 2006; Vaaler & Zhang, 2011). We further contend that strategy and IB researchers' interest in the scope of the firm can enable us to start addressing a previously underexplored question: how does cross-listing impact the scope of the firm?

Virtually all of the overseas exchanges where firms are cross-listed are in DE, especially the U.S. and U.K. markets.³ While a sizable number of cross-listed firms are from other DE (such as Canada and EU countries) (Pagano, Roell, & Zechner, 2002; Southam & Sapp, 2010), the majority of cross-listed firms in both the U.S. and U.K. markets are now from EE, led by firms, respectively, from China and Russia (Table 1). The liability of foreignness in capital markets substantially affects how cross-listed firms secure their resources in product and capital markets (Bell, Filatotchev, & Rasheed, 2012; Ding, Nowak, & Zhang, 2010). Therefore, the arrival of so many cross-listed firms from EE raises an interesting question: how does cross-listing impact the scope of the firm from EE?

Responding to the calls issued by Agmon (2006), Bell et al. (2012), Siegel (2009), and Vaaler and Zhang (2011) to integrate management and IB research with finance research, we draw on two leading perspectives from the management literature—the resource-based and institution-based views—and extend them to address the question on how cross-listing affects the scope of the firm from EE. These two perspectives have been found to be highly insightful when probing into firm strategy and behavior in EE (Ahuja & Yayavaram, 2011; Hoskisson et al., in press; Kim, Kim, & Hoskisson, 2010; Meyer, Estrin, Bhaumik, & Peng, 2009; Peng, Sun, Pinkham, & Chen, 2009; Wright, Filatotchev, Hoskisson, & Peng, 2005). This article leverages and extends these two perspectives in a new context—cross-listing—with a focus on the product and geographic scope of the firm.⁴

2. A resource-based view on cross-listing

The resource-based view argues that firms should acquire and leverage valuable, rare, costly-to-imitate, and organizationally embedded resources and capabilities to gain competitive advantage (Barney, 1991). From a resource-based view, the ability to cross-list on a high-profile exchange in DE (such as the NYSE) is valuable, rare, and hard-to-imitate. In 1997, the valuations of

foreign firms listed in the United States were 17% higher than their domestic non-cross-listed counterparts in the same country (Doidge, Karolyi, & Stulz, 2004). Despite the hurdle of the Sarbanes-Oxley (SOX) Act,⁵ the relatively small number of foreign firms that are able to cross-list on the NYSE are now rewarded more handsomely: their valuations are now 37% higher than comparable groups of domestic firms in the same country (Karolyi, 2010, p. 8). Foreign firms cross-listed in London do not enjoy such high valuations (Doidge, Karolyi, & Stulz, 2009). This seems to be classic resource-based logic at work. Due to challenges arising from SOX, it has become increasingly difficult for foreign firms to cross-list in the United States, making the selected few foreign firms that successfully do so more valuable, unique, and exceptional (Barney, 1991). Thus, they deserve higher valuations (Karolyi, 2006, p. 141).

These findings have important implications to help us understand the capabilities of certain cross-listed firms from EE. Shown in Table 1, on U.S. markets, Chinese firms moved from being the fifth largest group in 2000 (6% of all cross-listed firms) to being the single largest group in 2011 (30%). On U.K. markets, Russian firms moved from being the fourth largest group in 2000 (9% of all cross-listed firms) to being the single largest group in 2011 (26%). Not every firm that is listed in EE is qualified to cross-list in DE. Further, many EE firms that are qualified to cross-list in DE choose not to do so (Karolyi, 2006, p. 114). Doidge, Karolyi, Lins, Miller, and Stulz (2009) find that 10 firms remain at home for every firm that cross-lists.⁶ The fact that the growth of cross-listings from EE took place during the period of tightening regulations (such as SOX) suggests that certain (but not all) cross-listed firms from China, Russia, and other EE featured in Table 1 may indeed have unique capabilities that are highly valued by global investors.⁷ Consequently, cross-listed firms, especially those from EE, enjoy significant cost-of-capital advantages (Hail & Leuz, 2009).

3. An institution-based view on cross-listing

Treating institutions as independent variables, the institution-based view “focuses on the dynamic interaction between institutions and organizations and considers strategic choices as the outcome of such an interaction” (Peng et al., 2009, p. 66; see also Ahuja & Yayavaram, 2011; Holmes et al., in press; Kim et al., 2010; Van Essen, Heugens, Van Oosterhout, & Otten, 2012). As a

³ For the purposes of this article, the “U.S. markets” refers to the NYSE, NASDAQ, and AMEX, and the “U.K. markets” refers to LSE, AIM, and SEAQ. “Product markets” will be specifically labeled as such.

⁴ Reviewing why firms cross-list is outside the scope of this article. See Karolyi (2006) for a comprehensive review from a finance standpoint.

⁵ There is a debate on the impact of SOX on cross-listing. Litvak (2007) reports that SOX has greater costs than benefits from cross-listed firms. But Doidge et al. (2009b) find no evidence that after SOX, New York becomes less attractive than London for cross-listed firms. Joining this debate is outside the scope of our article.

⁶ Doidge, Karolyi, Lins, et al. (2009) suggest that the decision not to cross-list may reveal important information about the (relatively lackluster) value of that firm.

⁷ Doidge, Karolyi, and Stulz (2009, p. 253) note that cross-listing in New York “has unique governance benefits for foreign firms.”

strategic choice, cross-listing can be viewed as the outcome of such an interaction. For firms from EE whose home-country financial regulations and corporate governance standards are typically not world-class, cross-listing in DE reflects a commitment to adhere to higher-level and more stringent regulations in DE (Reese & Weisbach, 2002; Silva & Chavez, 2008). This is the essence of the bonding hypothesis (Coffee, 1999; Stulz, 1999).

Focusing on formal institutions, the bonding hypothesis emphasizes the legal bonding mechanisms in three forms: (1) the cross-listed firm becomes subject to the enforcement powers in DE (such as the SEC), (2) investors acquire the ability to exercise their rights (such as class-action lawsuits) that are typically not available in EE,⁸ and (3) cross-listing in DE commits the firm from EE to provide more transparent financial information (Coffee, 1999). Thus, the bonding hypothesis has been more accurately characterized as the “legal bonding hypothesis.” Overall, the legal bonding hypothesis has been supported by Doidge et al. (2004); Doidge, Karolyi, Lins, et al. (2009); Doidge, Karolyi, and Stulz (2010), Fernandes, Lel, and Miller (2010), Hail and Leuz (2009), Lel and Miller (2008), and Reese and Weisbach (2002).

The institution-based view distinguishes between formal institutions and informal institutions (Holmes et al., in press; North, 1990; Peng et al., 2009). Emphasizing formal institutions, finance researchers investigating the legal bonding hypothesis tend not to focus on the impact of informal institutions (as critiqued by Licht, Li, & Siegel, 2011). An important proposition in the institution-based view is that firms seek to maintain legitimacy when confronting institutional pressures (DiMaggio & Powell, 1983; Kostova & Zaheer, 1999). Although institutional pressures may come from both formal and informal constraints, in situations where the formal institutions are unclear, the informal institutions play a larger role in conferring legitimacy (Peng et al., 2009, p. 68). Given the relatively underdeveloped formal institutions in EE, firms in EE may be especially influenced by informal institutions (Estrin & Prevezer, 2011).

Siegel (2005) makes a distinction between formal market mechanisms (i.e., legal bonding) and informal market mechanisms (i.e., reputational bonding). Reputation bonding refers to the mechanisms that “enable many firms to bond themselves by building their reputation” (Siegel, 2005, p. 320). It is the prospect of creating a reputational asset can lead many (but not all) cross-listed firms to “observe rules that they are not forced to follow” (Siegel, 2005, p. 320). Sampling Mexican firms cross-listed in the United States, Siegel (2005) examines whether legal bonding or reputation bonding is more effective. Because SEC enforcement against cross-listed firms—a key mechanism for legal bonding—is less than satisfactory, Siegel (2005) concludes that informal market mechanisms (reputational bonding) better explains the cross-listing phenomenon than does formal market mechanisms (legal bonding). This conclusion has been strengthened by the more recent work of Licht et al. (2011), which further suggests that we need to pay more attention to reputation bonding based on informal institutions.

It is possible that as more firms from EE cross-list in DE, a new informal norm among certain larger, better managed, and more prestigious firms in EE has formed. Firms from EE may follow the norm to cross-list in an effort to imitate the early movers and to gain legitimacy (DiMaggio & Powell, 1983). While formal institutions, although important, cannot effectively police cross-listed firms, informal norms among cross-listed firms from EE that value

reputation for minority shareholder protection may emerge (Licht et al., 2011; Siegel, 2005). In addition, the diffusion of cross-listing may result from a learning and competitive motivation. For example, Guler, Guillen, and MacPherson (2002) focus on the diffusion of the adoption of ISO certification, and argue that not doing so would undermine a firm's competitive position. The diffusion of cross-listing among leading firms in EE may follow a similar informal logic. Existing work in finance has rarely focused on the impact of such informal norms behind cross-listing—a missing gap that strategy and IB scholars may start to fill (Estrin & Prevezer, 2011; Siegel, 2005, 2009).

Overall, while finance research concludes that cross-listing “reduces capital costs by improving corporate governance” (Stulz, 1999, p. 13), the resource-based and institution-based views from the management literature complement each other and provide additional insights behind the conclusion reached by finance research. Specifically, the resource-based view can help us understand why certain cross-listed firms—relative to non-cross-listed firms—gain advantage by reaping lower costs of capital, whereas the institution-based view focuses on the rules in DE governing corporate governance as the bedrock underpinning such advantage. How then do these two views help us understand the relationship between cross-listing and the scope of the firm?

4. Cross-listing and the product scope of the firm

The management literature suggests that the product scope of the firm is essentially a function of economic benefits and bureaucratic costs (Jones & Hill, 1988; Peng et al., 2005).⁹ Product scope refers to the number of different economic activities (industries, segments, product lines) a firm is engaged in (Peng et al., 2005). Overall, it is “the difference between relative benefits and costs that leads to the choice between strategies” (Jones & Hill, 1988, p. 160). The additional economic benefits of the last unit of growth (such as the latest cross-listing) can be defined as marginal economic benefits (MEB).¹⁰ The additional bureaucratic costs (such as the necessity to coordinate on a larger scale and hire additional accountants to satisfy cross-listing requirements) can be viewed as marginal bureaucratic costs (MBC) (Rawley, 2010; Zhou, 2010). Consequently, the product scope of the firm “is determined by a comparison of MEB and MBC” (Peng et al., 2005, p. 625). Graphically (Fig. 1), the optimal scope of diversification is D_1 . If the level of diversification is D_{1a} , there are some economic benefits to gain by moving up to D_1 . Conversely, if a firm overdiversifies to D_{1b} , downscoping to D_1 becomes necessary (Hoskisson & Hitt, 1994; Jones & Hill, 1988; Lee et al., 2008; Peng et al., 2005). In this section, we extend the earlier analysis undertaken by Jones and Hill (1988) and Peng et al. (2005).

In the case of economic benefits, cross-listing not only brings more plentiful and lower cost financing, but also facilitates the growth of the firm in new product markets (Khurana, Martin, & Periera, 2008). On the other hand, in terms of bureaucratic costs,

⁹ The term “bureaucratic costs” comes from two influential earlier management papers (Jones & Hill, 1988; Peng et al., 2005), which draw on Williamson (1985). Three recent management papers have used different terms that seem to be conceptually equivalent to bureaucratic costs: coordination costs (Rawley, 2010; Zhou, 2010) and governance costs (Rawley & Simcoe, 2010). For the sake of composition simplicity, we have followed Jones and Hill (1988) and Peng et al. (2005) to use bureaucratic costs.

¹⁰ Although we follow earlier management papers by Jones and Hill (1988) and Peng et al. (2005) to borrow the concept of marginal benefits and marginal costs from economics, we acknowledge that marginal analysis is a relatively simplistic tool and that once competition is introduced, equilibrium goes beyond marginal analysis. However, we assume that when firms pursue a strategic action such as cross-listing, managers primarily think about—given the opportunity costs—whether and how it may enhance benefits net of costs at the margin.

⁸ In a 2010 decision on *Morrison v. National Australia Bank Ltd.*, the U.S. Supreme Court broke from previous convention and signaled its intention to curtail investors' ability to use class-action lawsuits in fraud cases against cross-listed firms (Licht et al., 2011). Thus, one of the key bonding mechanisms seems to be weakened.

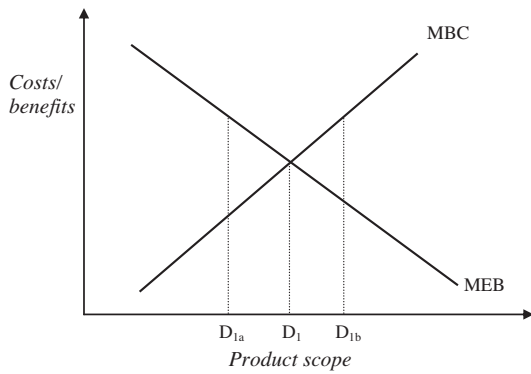


Fig. 1. The optimal level of product scope. MEB: marginal economic benefits; MBC: marginal bureaucratic costs.

Adapted from Jones and Hill (1988, p. 166) and Peng et al. (2005, p. 626).

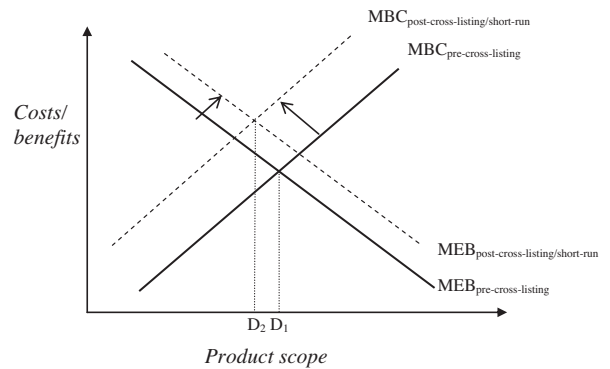


Fig. 2. Cross-listing and product scope in the short run.

cross-listing imposes nontrivial listing expenses, administrative processes, and legal compliance costs.¹¹ Bell et al. (2012) argue that cross-listed firms suffer from the tremendous liability of foreignness in capital markets because of the differences in institutions and disadvantages in assessing information in local markets. In the short run, these costs are likely to be especially significant. In the long run, these costs may be gradually absorbed. In addition to compliance costs, the costs of reorganizing lines of business may be especially salient in the short run. Western securities analysts often have a hard time understanding diversified firms from EE initially (Lee et al., 2008). How cross-listed firms from EE identify themselves becomes critical (Lundholm, Rogo, & Zhang, 2012). If they fail to attract reviews and endorsements from the appropriate securities analysts, they cannot attract potential investors to raise capital. Thus, cross-listed firms may either de-diversify or re-categorize their product lines in order to attract the attention of Western securities analysts at the time of cross-listing (Zuckerman, 2000). Reorganizing product scope also incurs significant costs in the short run.

Fig. 2 displays the product scope after cross-listing in the short run. When an EE-based firm decides to cross-list in DE, both MEB and MBC change. Cross-listing not only entails high monetary expenses, but also prolongs administrative review processes (Ding et al., 2010; Doidge et al., 2004). In addition, the cross-listed firm has to confront a significant liability of foreignness (Bell et al., 2012; Zaheer, 1995). Therefore, in the short run, $MBC_{pre-cross-listing}$ increases to $MBC_{post-cross-listing/short-run}$. Meanwhile, MEB also increases because the cross-listed firm may attract greater coverage from analysts and journalists, which in turn enhances firm reputation, attracts more potential shareholders, and reduces the cost of capital. If economic benefits do not increase as much as bureaucratic costs, then $MEB_{pre-cross-listing}$ moves to $MEB_{post-cross-listing/short-run}$ and the optimal product scope is D_2 , which is narrower than D_1 .

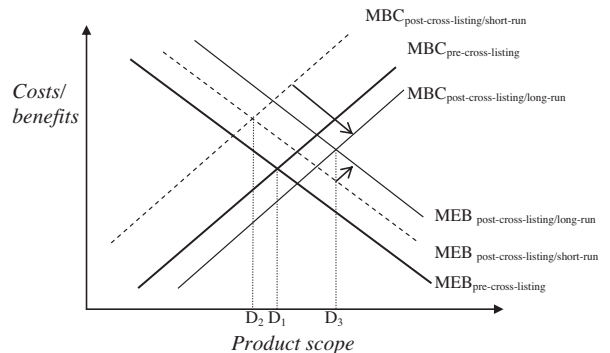


Fig. 3. Cross-listing and product scope in the long run.

Theoretically, if MEB and MBC increase by the same magnitude, the product scope will remain at D_1 . If MEB increases more than MBC, the optimal product scope will be wider than D_1 . However, we argue that MEB will not increase more than MBC in the short run. Although the firm raises more capital via cross-listing, it may not be able to immediately allocate additional funds to profitable projects in the short run. When the firm cannot leverage its resources into action, even achieving temporary advantage is difficult (Sirmon, Hitt, Arregle, & Campbell, 2010). Also, listing expenses are often prohibitive, forcing the firm to amortize these expenses over a number of years after the initial cross-listing.¹² Furthermore, especially for a firm from EE, the liability of foreignness is most significant in the short run (Bell et al., 2012). It takes time and energy to adjust to a new, demanding, and unfamiliar institutional system (Zuckerman, 2000). In summary, we argue that the net effect of MEB and MBC changes will reduce the product scope of the firm in the short run. Therefore, we suggest the following proposition.

Proposition 1a. After cross-listing, the product scope of a firm will contract in the short run.

After the initial cross-listing, the product scope of the firm may change in the long run (Helfat & Eisenhardt, 2004). Illustrated in Fig. 3, in the long run, $MBC_{post-cross-listing/long-run}$ is reduced. It is because the listing costs have been amortized and the cross-listed firm enjoys the lower cost of capital that can facilitate its growth

¹¹ For EE firms cross-listed in DE, the legal compliance costs may be especially prohibitive, considering the significantly higher liabilities exposed to DE-based regulatory agencies and shareholder lawsuits. This does not suggest that enforcement by DE-based regulators (such as the SEC) is comprehensive and perfect—Siegel (2005) reports that this is not the case. However, it seems plausible to argue that imperfect enforcement still has some deterrence against potential wrongdoing. Recent evidence finds that U.S. investors react negatively once the legal bonding is loosened and cross-listed firms that were previous targets of U.S. class action securities lawsuits can more easily deregister (due to loosening SEC regulations) (Doidge et al., 2010). In other words, U.S. investors in cross-listed firms place significant value on U.S. securities regulations, especially when investing in cross-listed firms that come from countries with weak investor protection (Fernandes et al., 2010).

¹² Focusing on entrepreneurial firms listing on Hong Kong's and Shenzhen's second board (not the main board), Ding et al. (2010, p. 179) report that mainland Chinese firms cross-listed in Hong Kong spent on average 26.1% of the total funds raised on issuance costs, whereas mainland Chinese firms listed in Shenzhen only spent 6.7% of the total funds raised on issuance costs.

(Bell et al., 2012; Khurana et al., 2008). In addition to the lower economic and financial costs, the cross-listed firm has been better adapted to the more demanding institutional environment. Furthermore, the liability of foreignness is also reduced in the long run. This may be translated into an ability to attract higher-caliber talents and to reduce turnover overseas, resulting in lower costs in hiring and retaining talents—one example of reduced bureaucratic costs. In the long run, the more experienced the firm from EE is in dealing with the DE environment, the less bureaucratic costs it shoulders. Therefore, $MBC_{\text{post-cross-listing/short-run}}$ moves to $MBC_{\text{post-cross-listing/long-run}}$ in Fig. 3.

On the other hand, MEB may increase in the long run. During the initial cross-listing, some skeptical investors may be concerned about the legitimacy and capabilities of the cross-listed firm from EE. But the liability of foreignness in the capital markets can be overcome by “bonding” themselves to the DE regulatory regime. Furthermore, the legitimacy and reputation of cross-listed firms will be enhanced through organizational isomorphism and the accumulation of third-party endorsements such as prestigious underwriters, audit firms, and alliance partners (Bell et al., 2012; Shi et al., 2012). Therefore, the longer the EE-based firm is cross-listed in DE, the stronger and the more credible the signals it shows, and the more foreign shareholders it attracts. From a resource-based standpoint, the cross-listed firm—armed with a better reputation and more capital—may have accumulated more capabilities to leverage valuable and rare resources and capitalize on opportunities, thus expanding its product scope. From an institution-based view, the EE-based firm initially confronts different rules of the game in DE. While it may experience adjustment difficulties initially, in the long run it may be better adjusted to DE-based regulations. Its managers may become more comfortable in interacting with DE-based shareholders, regulators, analysts, and journalists (Baker, Nofsinger, & Weaver, 2002). In summary, in the long run, the costs go down and the benefits go up. Thus, we propose the following proposition.

Proposition 1b. *After cross-listing, the product scope of a firm will expand in the long run.*

For the sake of parsimony, product scope in Propositions 1a and 1b refers to the total product diversification, which consists of related diversification and unrelated diversification. Intuitively, related diversification refers to the extent to which a firm's operations are *within* an industry, while unrelated diversification refers to the firm's operations *outside* an industry (Palepu, 1985; Rumelt, 1974). After theorizing about the change of product scope of cross-listed EE firms, we now further argue that in the short run, cross-listed firms will decrease their related diversification, making their product scope narrower. But in the long run, both related and unrelated diversification will contribute to the increase of cross-listed firms' product scope.

According to the bonding hypothesis, firms from EE cross-list in DE because weak institutions in EE cannot provide firms sufficient resources and sound protection. These underdeveloped institutions are generally referred to as institutional voids (Khanna & Palepu, 1997). In EE, firms usually have better advantages if they have diversified product scope, especially when expanding into unrelated industries. When firms have operations across different industries, they can control more information from various product markets. This information serves as costly-to-imitate resources to fill the institutional voids in capital, labor, and product markets (Lee et al., 2008). Therefore, considering these unrelated operations may play the role of accessing and controlling credible information, firms in EE may not easily give away such valuable resources derived from unrelated operations when they face the challenge to downscale their product scope. In this vein, to

mitigate the increased costs from cross-listing, the level of related diversification will decrease. Thus, we suggest the following proposition.

Proposition 2a. *After cross-listing, related diversification of a firm will decrease while unrelated diversification remains at a similar level in the short run.*

In the long run, cross-listing brings about attainable benefits, such as lower cost of capital, better institutional protection, and stronger reputation (Coffee, 1999; Siegel, 2005; Stulz, 1999). Therefore, firms have more resources to allocate to both related diversification by leveraging technological synergy and unrelated diversification by leveraging financial synergy (Hoskisson & Hitt, 1994). Although research in DE suggests that better formal institutions may limit the necessity of unrelated diversification (Peng et al., 2005), recent research in EE argues that ambitious firms from EE may have different motivations from conventional DE firms, and these ambitious EE firms will accelerate their expansion by leveraging their capabilities from both DE and EE (Guillen & Garcia-Canal, 2009; Ng, 2007). Therefore, we argue that cross-listed firms from EE are those ambitious firms that are likely to increase both related and unrelated diversification in the long run. Specifically, the following proposition is proposed.

Proposition 2b. *After cross-listing, both related and unrelated diversification of a firm will increase in the long run.*

What is the short run? What is the long run? Answers to these questions depend on a firm's pace of growth (Tan & Mahoney, 2005) and capabilities to adapt to a new institutional system (Peng et al., 2005, pp. 630–631). We therefore cannot predict directly how short the short run is or how long the long run is. Instead, we argue that there will be adjustment of product scope after cross-listing and that such an adjustment is a reflection of the combination of MEB and MBC. In other words, cross-listing enables firms to engage in resource orchestration (Sirmon, Hitt, Ireland, & Gilbert, 2011). From a resource-based standpoint, the speed and effectiveness of such resource orchestration are *firm-specific*—a certain length of time that is viewed “long run” in firm A may be viewed “short run” in firm B.¹³

For example, Baidu—the largest search engine company in China—was founded in 2000 and listed on NASDAQ in 2005. Before listing on the NASDAQ, Baidu had eight main product groups for website users. At the time of listing on the NASDAQ in 2005, Baidu adjusted and narrowed its main product groups from eight to seven. In its 2005 annual financial report, Baidu (2005, pp. 15–16) admitted listing on NASDAQ as a short-run risk factor that affected its future prospects:

As a public company, we have incurred and will continue to incur significant legal, accounting, and other expenses that we did not incur as a private company. We have incurred and will continue to incur costs associated with our public company reporting requirements. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly.

Not until 2007 did Baidu broaden its product scope from seven to 10 main categories, expanding beyond its pre-cross-listing scope. While Baidu's experience seems to support Propositions 1 and 2, it took Baidu a relatively short span of three years (2005–2007) to move from contracting to expanding its product scope. But for other firms, the processes and changes may take longer,

¹³ In the authors' consulting engagements, one of the first questions we tend to ask is: “In this firm, how long is long run? How short is short run?” The answer tends to differ from firm to firm.

making it difficult to theorize a priori on the exact demarcation between the short run and the long run. But regardless of how long it takes, the need to make inter-temporal adjustments in the scope of the firm over time seems compelling (Helfat & Eisenhardt, 2004; Peng et al., 2005; Sirmon et al., 2010, 2011).

5. Cross-listing and the geographic scope of the firm

The determinants of the geographic scope of the firm have attracted significant attention (Cardinal, Miller, & Palich, 2011; Contractor, Kundu, & Hsu, 2003; Goerzen & Beamish, 2003; Hennart, 2011; Lu & Beamish, 2004; Qian, Khoury, Peng, & Qian, 2010; Rugman, 2005). But how cross-listing impacts the geographic scope of the firm has remained underexplored. We argue (1) that due to self-selection, internationally active firms are likely to cross-list, and (2) that cross-listing will further facilitate the expansion of geographic scope. It is important to note that when referring to “geographic scope,” we follow the convention in the IB literature to refer to the geographic scope of the firm’s *product market operations*, which can be measured by international sales over total sales and/or the number of overseas subsidiaries among all subsidiaries.¹⁴ In other words, we do not focus on the geographic scope of financing, which is inherently more diversified for cross-listed firms than for non-cross-listed firms (Banalieva & Robertson, 2010).¹⁵ This focus on the product market dimension stems from our argument that cross-listing is not only a financial decision, but also a strategic decision with strong ramifications on the success or failure of product market competition (Hasan et al., 2011).

On the product market dimension, firms that are export driven, experience strong growth, and have high levels of aspirations are likely to cross-list (Pagano et al., 2002). Given the tremendous upfront costs, underperforming firms simply cannot afford to pay for the cross-listing expenses and would have little odds of attracting global investors. Therefore, by self-selection, only top-performing, internationally active firms will proceed to cross-list (Pagano et al., 2002). Given the liability of foreignness, management at cross-listed firms has to confront the scrutiny of overseas shareholders, regulators, analysts, and journalists (Baker et al., 2002; Lundholm et al., 2012). It is difficult to imagine that internationally inexperienced managers (on the product dimension) would want to confront such scrutiny. On the other hand, internationally experienced managers (on the product dimension) may find it less intimidating to confront such scrutiny associated with cross-listing.

Moreover, we argue that cross-listing may facilitate the further expansion of the geographic scope of the firm. Because cross-listing will attract (generally) positive coverage by analysts and journalists (especially those in DE), cross-listing may enhance its visibility and reputation. As a result, cross-listing may lead to positive spillovers to product market sales and helps win more customers globally (Hasan et al., 2011; Khanna & Palepu, 2004). This effect may be especially profound for firms from EE that cross-list in DE. To meet the stringent listing requirements in DE, cross-listed firms from EE have to promote themselves, by signaling that they are more competitive than non-cross-listed firms back home. Therefore, while firms from the host country where cross-listing takes place or from any third country seek potential alliance partners, suppliers, and customers, cross-listed firms—due to

better reputation and legitimacy—may consequently attract more attention and obtain more opportunities (Siegel, 2009). Thus, these opportunities may lead to an expansion of the geographic scope of cross-listed firms (Hasan et al., 2011).

While raising more plentiful and lower cost capital is an attractive benefit, some firms cross-list primarily for the purposes of enhancing their product market reputation and expanding their geographic scope. For example, when interviewed, Indian managers at Infosys, which was cross-listed on the NASDAQ, denied that their primary purpose in cross-listing was to access capital, which it had plenty. Instead, the primary reason cited was to enhance reputation and gain credibility with Western product market customers in the rough-and-tumble software product market (Khanna & Palepu, 2004). In other words, cross-listing makes Infosys stand out in the product market and enhances its geographic scope. In sum, we propose the following proposition.

Proposition 3. *After cross-listing, the geographic scope of a firm will expand.*

While cross-listing enhances the geographic scope of the firm in general, we further argue that cross-listing affects the *mode* with which the firm expands internationally, especially in the host country. Specifically, cross-listing facilitates more mergers and acquisitions (M&As) in the host country (Burns, Francis, & Hasan, 2007; Kumar & Ramchand, 2008). M&As can be financed by cash or the acquirer’s equity. Prior to cross-listing, the firm of course can undertake M&As in the host country using cash; but shares traded on the stock exchange in the home country (such as the Shanghai Stock Exchange) cannot be used to acquire targets in the host country (such as the United States). For a Chinese firm, cross-listing on the NYSE can not only raise more cash to undertake M&As in the United States, but can also leverage the NYSE-traded shares to engage in more and larger scale M&As in the host country (Karolyi, 2006). In theoretical terms, cross-listing reduces the information asymmetries between the acquirer (whose shares are cross-listed) and the target (which is in the host country), because there is “less disagreement about the intrinsic value of the acquirer’s equity” (Tolmunen & Torstila, 2005, p. 124).

From a resource-based view, a hypothetical Chinese firm that is cross-listed on the NYSE—relative to its non-cross-listed Chinese competitors—is in a better and more advantageous position to expand its geographic scope by undertaking M&As in the United States (Deng, 2009; Peng & Blevins, 2012; Yang, Sun, Lin, & Peng, 2011). From an institution-based view, cross-listing reduces the liability of foreignness by enabling the use of the NYSE-traded shares to acquire targets in the United States (Bell et al., 2012). For EE-based firms whose expansion in DE may meet political resistance (Globerman & Shapiro, 2009), cross-listing thus reduces some resistance and facilitates smoother entry and expansion in DE.¹⁶ Worldwide, only less than half of the overseas M&A deals announced by Chinese firms (most of which are not cross-listed) are completed (Sun, Peng, Ren, & Yan, 2012). Cross-listing by some Chinese firms thus increases, in a nontrivial way, the odds for successful completion of overseas M&As (Peng & Blevins, 2012). Moreover, when acquiring equivalent targets in the host country, cross-listed firms that use their equity traded in the host country may be able to pay less than non-cross-listed firms that pay with cash (Tolmunen & Torstila, 2005). As a result, cross-listed firms—relatively to their non-cross-listed peers at home—are able to embark on larger cross-border M&A deals. To summarize:

¹⁴ Recent critiques of this measure can be found in Cardinal et al. (2011) and Hennart (2011).

¹⁵ It is possible that a cross-listed firm sells all its output in one country (its home country). On the financial dimension, this firm may be viewed as having a higher level of geographic scope (relative to non-cross-listed firms). But on the operational dimension, we view this firm, with no international sales, as having very limited geographic scope.

¹⁶ In a report on the alleged national security threat of two Chinese telecom equipment firms Huawei and ZTE (none of them was cross-listed), the U.S. Congress specifically argued that “Chinese companies should quickly become more open and transparent, including listing on western stock exchange with advanced transparency requirements” (U.S. Congress, 2012, p. 45).

Proposition 4. *After cross-listing, a firm's propensity to engage in mergers and acquisitions in the host country of cross-listing will increase.*

It is important to note that neither does cross-listing cause an internationally inactive firm to expand geographic scope, nor does it cause a firm that seldom pursue M&As to become an eager participant in M&As (Tolmunen & Torstila, 2005). When it comes to cross-listing, the most dynamic, internationally oriented, and M&A-active firms self-select to embark on the more significant challenges of cross-listing (Ding et al., 2010; Pagano et al., 2002). The likely rewards are wider geographic scope, more frequent and larger sized M&A deals, and higher likelihood of successful completion of M&A transactions.

6. Discussion

6.1. Contributions

Three contributions emerge from this article. First, we have broadened the scope of research on the scope of the firm, by highlighting a previously underexplored link between cross-listing and the product and geographic scope of the firm. Responding to Agmon (2006), Bell et al. (2012), Siegel (2009), and Vaaler and Zhang (2011), our integrative work not only draws on finance research, but also leverages two leading management and IB perspectives (the resource-based and institution-based views) to probe into the strategic nuances associated with cross-listing that have been overlooked in previous research. Although some of the earliest research on multinational enterprises (MNEs) focused on financial internationalization (Aliber, 1978), recent work on MNEs has deviated from these roots and focused more on the product market side. The rise of cross-listing may help revive MNE researchers' earlier interest in financial internationalization and integrate research both on the product market side and the financial market side, resulting in a deeper understanding of the link between cross-listing and the scope of the firm (Rasheed & Yoshikawa, 2012).

Second, we contribute to the management and IB literature, especially the institution-based view (Ahuja & Yayavaram, 2011; Holmes et al., in press; Kim et al., 2010; Peng et al., 2009). Peng et al. (2005) define institutional relatedness as "the degree of informal embeddedness or interconnectedness with dominant institutions." A core proposition is that "the higher the institutional relatedness (number and strength of informal ties with dominant institutions), the greater the scope of the firm" (Peng et al., 2005, p. 628; see also Li, He, Lan, & Yiu, 2012; Sun, Mellani, & Liu, 2011; Xu, Huang, & Gao, 2012). Extending this stream of research, we can view cross-listing as an effort to increase the institutional relatedness with dominant host-country institutions. While cross-listing certainly has formal components (such as the clearing of formal listing requirements), we argue that what drives the expanded scope of the firm may be the informal components—the stronger reputation, the enhanced familiarity for both the cross-listed firm to know the host-country stakeholders and for the host-country stakeholders to know the cross-listed firm, and consequently the reduced liability of foreignness (Bell et al., 2012). More generally, this article offers a new angle to explore how firms interact with different institutional environments. Cantwell, Dunning, and Lundan (2010) argue that institutional environment is not completely exogenous but partially endogenous—that is, firms can (at least partially) choose their own institutional environment. Following Cantwell et al. (2010), Witt and Lewin (2007), and Yamakawa, Peng, and Deeds (2008), we suggest that cross-listed firms (especially those from EE) can avoid some of the trappings of the relatively poor corporate governance standards

associated with the institutional environment in EE by signaling their willingness to satisfy the more stringent requirements in DE.

Finally, focusing on the rise of EE firms that cross-list, this article contributes to the recent literature calling for better theory building and understanding of this new breed of MNEs in the global economy (Hoskisson et al., in press; Peng, 2012). For example, Guillen and Garcia-Canal (2009) propose that it is important for these new MNEs to accelerate the speed of internationalization. While the existing literature has focused on these firms' product market side (which, of course, is crucial), we suggest that cross-listing is an important but previously underexplored channel through which internationalization can be accelerated.

6.2. Limitations and future research directions

The limitations of this article suggest a number of future research directions. First, although some scholars suggest that product scope and geographic scope affect each other (Hitt et al., 1997; Peng & Delios, 2006), we have discussed product scope and geographic scope separately. How these two types of the scope of the firm interact with each other, in the context of cross-listing, remains to be seen (Luo, 2007; Peng, 2014). While, in this first attempt in the management and IB literature to develop a theory of firm scope and cross-listing, we have focused on direct effects, future work should tease out moderating and mediating effects.

Second, while we have drawn on the resource-based and institution-based views from the management and IB literature, future research can benefit from additional theoretical perspectives such as signaling theory (Bell et al., 2012). We focus on the resource-based and institution-based views because these two perspectives are the closest to the bonding hypothesis. Although our arguments are not directly derived from signaling theory per se, this theory is embedded in the resource-based view—cross-listing as a signal is value, unique, and hard-to-imitate. Furthermore, signaling theory is usually used to investigate the antecedents and processes of initial public offerings (IPOs) (Ragozzino & Reuer, 2011). The current article focuses on the consequences of cross-listing. We believe that future cross-listing research can leverage signaling theory more (Bell et al., 2012; Ragozzino & Reuer, 2011).

Third, we have not considered the heterogeneity of firms from EE. One prominent type of firms in EE is business groups. Institutional voids make business groups (such as *chaebols* in Korea) thrive because these business groups can overcome the institutional weakness in EE by leveraging their wide-ranging product scope (Khanna & Palepu, 1997; Kim, Bae, & Bruton, 2012; Lee et al., 2008; Ramaswamy, Li, & Pettitt, 2012). Another type of firms that thrives in EE is state-owned enterprises (SOEs) (Peng, Bruton, & Stan, 2012). Because SOEs have strong financial and legal support from the home country government, they may have other agendas than legal and reputational bonding when cross-listing. A third prominent type of firms in EE is family firms (Globerman, Peng, & Shapiro, 2011; Jiang & Peng, 2011). Doidge, Karolyi, Lins, et al. (2009) find that family firms in EE are less likely to cross-list in the United States if the controlling shareholders can consume private benefits. Overall, how cross-listing differentially impacts the scope of various types of firms—such as business groups, SOEs, and family firms—remains to be explored in future research.

Lastly, while the scope of the firm is a major organizational outcome of cross-listing, other post-cross-listing organizational outcomes may also be of interest. One example is executive compensation (Van Essen et al., 2012). Southam and Sapp (2010) report that non-U.S. firms may be interested in cross-listing in the United States so that their CEOs can earn compensation comparable to U.S. CEOs, who earn substantially more than CEOs of non-cross-listed, non-U.S. firms. Given management scholars'

intense interest in executive compensation, exploring the link between cross-listing and executive compensation will likely open another interesting avenue for research.

7. Managerial relevance

Our paper provides three important managerial implications for firms in EE, especially those young, competitive, and ambitious ones. First, cross-listing provides firms a good starting point to unfold their scope both product-wise and location-wise. Weak institutions in EE not only limit a firm's capital resources financially but also constrain its growth strategically. In this regard, managers should follow the stringent institutional requirements to really gain the benefits from cross-listing derived from legal and reputational bonding.

Second, managers should be aware that after cross-listing their product scope will change. Firms may be advised to reduce their scope of related diversification in the short run to strive for efficiency. Additionally, we suggest that firms maintain the similar level of unrelated diversification because firms still have to respond to institutional voids in EE. However, when firms gradually gain benefits derived from cross-listing in the long run, they can then increase product scope via both related and unrelated operations. In this way, firms can accelerate their expansion speed by leveraging both technological synergy and financial synergy.

Lastly, managers should also be aware that after cross-listing the likelihood of M&As will increase. Managers thus need to equip themselves with both the knowledge and the psychological preparation to deal with the complexities and frustrations associated with cross-border M&As (Peng, 2014).

8. Conclusions

Drawing on the resource-based and institution-based views, we argue that the answer to the fundamental question in strategy and IB, "What determines the scope of the firm?" may benefit from probing into the impact of cross-listing. In conclusion, cross-listing is not merely a financial decision that deserves to be studied by finance researchers. It is a strategic decision with a significant impact on the product and geographic scope of the firm—an intriguing area awaiting further development of a theory of cross-listing and firm scope.

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