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INTERNATIONALISATION EFFORTS OF CHINESE AND INDIAN COMPANIES: AN EMPIRICAL PERSPECTIVE

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ABSTRACT
In this paper we aim to understand the internationalisation strategies of companies from India and China. In particular we focus on two external organisational modes: mergers and acquisitions (M&As) and strategic technology alliances. Using a large longitudinal data set we show that Greater China and India are emerging as important players in worldwide M&As and alliances whereas the traditional dominance of the US in both these activities is on the decline. Our analysis of the patterns of M&As and alliances revealed important similarities and differences between the two countries.

Key words: M&As, strategic alliances, internationalisation, India, China

INTRODUCTION

The last two decades have witnessed the breaking away of a number of less-developed countries from decades of poor economic performance, attracting much interest from academia, business, media, and policy circles. The speed of the economic transformation in emerging economies such as China and India has been unprecedented, or at least comparable to the best in the past (e.g. Bosworth & Collins 2008). Their appearance on the world stage has coincided with a shift towards domestic economic liberalisation and openness to trade and foreign investment. These macro changes are a precondition for transformations at the firm level (Dosi *et al.* 1988; Frenken *et al.* 2007; Nelson 2008; Niosi 2008; Lundvall *et al.* 2009; Malerba & Mani 2009; Cusmano *et al.* 2010), unleashing major changes in several micro domains simultaneously (Nelson & Sampat 2001; Fagerberg & Verspagen 2002). In this respect, a key development has been the widespread entry of firms from advanced countries into these economies. More recently, China and India have attracted technologydriven investments. Backed by major R&D investments from leading companies such as Motorola, Microsoft and IBM, China and India have gradually become a hot spot for global R&D investments. A survey published in the World Investment Report (UNCTAD 2005) ranked China and India in the top three R&D locations of choice for global multinational companies.

In addition, domestic enterprises in China and India have been undergoing major transformations. After thriving in a domestic market cut off from foreign competition, many of these firms have proven to be able to withstand foreign competition domestically. Even more significantly, they have taken competition right to the doorsteps of the foreign firms by internationalising their operations (Duysters *et al.* 2009).

The international business literature has, in recent years, paid much attention to the internationalisation strategies of firms from these two countries (e.g. Chittoor *et al.* 2008; Ramamurti & Singh 2009). As in other emerging economies (e.g. South Korea, Taiwan) internationalisation or an outward-looking strategy is considered to be important for rapid economic growth in less developed countries. However, the motives for the internationalisation of firms from emerging economies are varied and are yet to be fully understood. However recent years have witnessed a clear increase in the importance of one of these motives, namely global technology sourcing (Goldstein 2007).

Internationalisation that is aimed at global technology sourcing comes in many different organisational forms (Morrison *et al.* 2008), depending particularly on the stage of development of the country. In the early stages of development, production and investment capabilities are more important, whereas in later stages of development, fostering innovation capabilities become the top priority. Traditionally, global technology sourcing by firms from less-developed countries took the form of licensing of foreign technology, reverse engineering, inward foreign direct investment (FDI), and production relationships with foreign firms. For China and India in particular, until the early 1990s, licensing was the primary route to the acquisition of foreign technology, with their governments often being involved in 'contract bargaining' with foreign firms on behalf of the domestic firms. However, globalisation and the institutions governing it, such as the World Trade Organisation (WTO), have reduced the ability of governments to control technology. It is in this context that other modes of technology sourcing have become a top priority for emerging multinational corporations (MNCs) from countries such as China and India. Thus over the last two decades external technology acquisition modes such as mergers and acquisitions (M&As) and strategic technology alliances are gaining in importance, pointing to the new focus of emerging economy firms on fostering their innovation capabilities. Reinforcing this trend, foreign MNCs are increasingly outsourcing their knowledge intensive functions and engaging in international technology deals which have opened up new opportunities for knowledge assimilation for firms from emerging economies (Athreye & Cantwell 2007).

Given their large size and fast growth, a greater understanding of the internationalisation strategies pursued by firms from China and India will offer insights into the role played by international linkages in shaping both their current state and the direction that they will take in the near future. Such insights are valuable, especially in the light of the current debate on the issue of the extent and the processes by which emerging economies are catching up in technological capabilities (Athreye & Cantwell 2007). In this paper, we will map the broad globalisation patterns of Chinese and Indian firms in terms of their M&As and strategic technology alliances.

Despite some notable empirical attempts to compare China and India from an outward foreign direct investment (OFDI) perspective (Brienen *et al.* 2010; Milelli *et al.* 2010) this is, to the best of our knowledge, the first empirical paper to address the internationalisation of Chinese and Indian companies from both an acquisition and alliance perspective. This is a major departure from extant research because both alliances and M&As are more flexible and less risky alternatives to FDI. Including the alliance perspective is particularly important because alliances are increasingly viewed as a viable and often preferred alternative to acquisitions in the internationalisation process. Other previous work on internationalisation activities emanating from emerging economies has often focused on multinationals in either China (Child & Rodrigues 2005; Rugman & Li 2007; Morck *et al.* 2008) or India (Kumar 2009; Nayyar 2008). More recent work (Athreye & Kapur 2009) has called for a joint approach, focusing on China and India in comparison. So far, however, a comparative country level analysis on this topic in regard to Chinese and Indian firms is clearly missing in the literature.[1]

In mapping the internationalisation efforts of firms from China and India, we distinguish between inward, outward, and domestic M&As and strategic alliances, taking into account the source and destination of the M&As and strategic alliances. This approach provides more fine-grained information, enabling us to draw more refined conclusions. Aggregate trends in M&As or alliances mask important dynamics that underline knowledge sourcing strategies. For example, in the case of inward M&As or alliances the initiative generally derives from foreign firms that are eager to access local markets (e.g. Ambos & Ambos 2009). However, in the case of outward M&As or alliances it is the domestic firm that takes the initiative. Therefore compared to firms' inward M&As or alliances, their outward M&As or alliances suggest that they possess significant firm-specific strategic advantages, which have enabled them in the first place to tap into global markets and global technologies (Duysters *et al.* 2009). Domestic M&As and alliances are suggestive of the efforts by domestic firms to strengthen their market positions. This approach is particularly salient as recent findings suggest that while region specific R&D activities can be persistent, they may also result in complementary activities in other locations (Jacob *et al.* 2013).

The following section describes the theoretical background of this paper. In the third section we describe the data sources and the approach adopted. In the fourth section we carry out a detailed empirical analysis of M&As, followed by a similar analysis of strategic technology alliances in the fifth section. In the sixth section, we present a number of Analysis of variance (ANOVA) tests to measure whether the internationalisation efforts of the three countries differ significantly from each other. The final section discusses the main findings and concludes.

THEORETICAL BACKGROUND

The catch up literature has traditionally focused on the mechanisms with which Southern firms can access and assimilate modern technologies that are developed by Northern firms (Gerschenkron 1962). In recent years this literature has focused squarely on internationalisation strategies as an important channel of technology diffusion into emerging economies (Nelson 2008). Although until recently the internationalisation of less developed countries (LDCs) was not a widely debated issue in practitioner oriented literature and academic studies, the international orientation of firms in the developing world is not a new phenomenon. Already by the 1980s, Lall (1983) and Caves (1982) pointed to the growing outward orientation of companies from LDCs. At that time, theory stressed the importance of size and assets for success in foreign markets. Typically, large diversified firms that possessed considerable amounts of unused assets such as raw materials, engineering skills and financial resources were actively seeking new markets in an attempt to employ these resources and reap the economies of scope (Caves 1982).

Besides seeking new ways to escape from stagnating home markets, they were also engaging in international activities as a result of government policies that were geared to stimulating import-substitution and exports (Duysters *et al.* 2009). The recent surge in FDI from many emerging economies also owed significantly to government policies aimed at speeding up the development and internationalisation process of their respective countries (Narula 1996; Child & Rodrigues 2005). For example in China, the 'go global' policy has been noted as a key example of government-push internationalisation (see Child & Rodrigues 2005).

In the past, it was particularly large firms from emerging markets who benefited from national protection and state support, which also allowed them to access foreign technology on favourable terms (Amsden 1989). However, recent evidence on internationalisation disputes the traditional view that international markets are the sole playground of large companies (cf. Lall 1983). A new breed of firms, the so-called born-globals, has made their way into international markets (Rialp *et al.* 2005; Fan & Phan 2007). Born-globals are typically small firms that internationalise very early on in their life cycle. Zhou *et al.* (2007), for example consider a firm to be a born-global if it succeeds in generating more than 10 per cent of its sales abroad within 3 years after its inception. Born-globals typically benefit from reduced communication and co-ordination costs and the emergence of the Internet. They produce in low wage countries and sell their products globally through the Internet. Also young firms from LDCs seem to be increasingly active in global alliances, leveraging their specific local advantages. By employing information on both MNCs as well as small companies this paper takes fully into account the heterogeneity in the composition of firms, revealing a fuller picture of internationalisation strategies of Chinese and Indian firms.

The above discussion indicates that companies from emerging economies are actively searching globally for technological assets that are not available in their home countries and consequently global knowledge acquisition has become one of the key motives of internationalisation for firms from emerging markets (Dunning & Lundan 2008). Therefore any analysis of the determinants of innovation in emerging economies requires an understanding of firm's external acquisition of technological capabilities (Morrison *et al.* 2008). Against this background, this paper aims to explore the internationalisation patterns related to the global technology sourcing strategies of Chinese and Indian firms.

DATA AND METHOD

We will use two main databases: the Securities Data database of Thomson Financial for data on M&As and the Thomson Financial Securities database on strategic alliances. It is important to note that while mergers and acquisitions are not quite the same, we will make no distinction between the two.[2] Both of the external organisational modes (M&As and strategic alliances) are employed by Chinese and Indian firms to meet their internationalisation needs.

Since our period of analysis starts in 1985 and ends in 2012 we need to define which parts of today's China we are considering. In 1997 China and Hong Kong were reunited. We therefore use China to refer to mainland China and Greater China to refer to China plus Hong Kong.

We adopt the following approach. We first look into the orientation (inward, outward, or domestic) of the two modes of internationalisation. We define an inward M&A or alliance as one that takes place between a domestic firm and a foreign firm inside the domestic economy, and an outward M&A or alliance as one that takes place between a domestic firm and a foreign firm outside the domestic economy. A domestic M&A or alliance takes place between domestic firms inside the domestic economy.

We then explore the major global destinations of the outward M&As and outward alliances of (Greater) China and India. Our long period of analysis, from 1985 to 2012, covers almost the whole era of modern economic growth in China and India. This allows us to view the findings in terms of different stages of development and different policy structures in (Greater) China and India.

MERGERS AND ACQUISITIONS

M&As have a long history, and there have been several significant merger waves since the turn of the last century. While there are many common characteristics underlying these M&A waves, each wave is different in many respects, but mainly in terms of the underlying motives. Our study covers the last three of these global M&A waves, two of which significantly involved firms from Greater China and India (Martynova & Renneboog 2008).

We discuss M&As in terms of the number of M&A deals,[3] and the remainder of the M&A section is organised as follows. First, we discuss the general trends in M&A activity over the period 1985–2012 worldwide and in the US (the traditional leader in global M&As). We then explore the trends for China and India in both absolute terms and relative to global M&As. Thereafter, we investigate the orientation (inward, outward, or domestic) of M&A activities and its change over time in the three regions. We then study the major destinations of outward M&As from each region.

Trends in global M&A activity: 1985–2012 – The cyclical nature of M&As, noted above, implies that the extent of M&A activity in Greater China and India must be seen in the context of the developments in global M&As and the motives underlying them. Figure 1 shows the number of M&A deals per year from 1985–2012 worldwide and in the United States. The US dominated M&A activities during the 1980s but since then its domination has been on the decline. Worldwide M&A activity showed a marked increase during the first half of the 1980s, from just 112 deals in 1980 to 4,610 deals in 1984. After a brief slowdown in growth in 1985, M&A activity grew rapidly during the 1990s. The global economic downturn of the early 2000s, triggered by the 2001–2003 recession in the US, dampened the merger momentum temporarily. Since then, M&As have once again been on a rapid growth path up to the year 2008. In that particular year, we notice a small decline in the number of worldwide M&As, and this downward trend seems to continue in the years 2009 and 2012.

Trends in the M&A activities of Chinese, Hong Kong, and Indian firms: 1985–2012 – Figure 2 shows the number of M&A deals per year from 1985–2012 in China, Hong Kong, and India; the number of worldwide deals is also shown for comparison. In general, M&As associated with firms from China, Hong Kong, and India follow the global trend. However, an exception was China in the early 2000s. Defying the global decline in M&As during this period, China

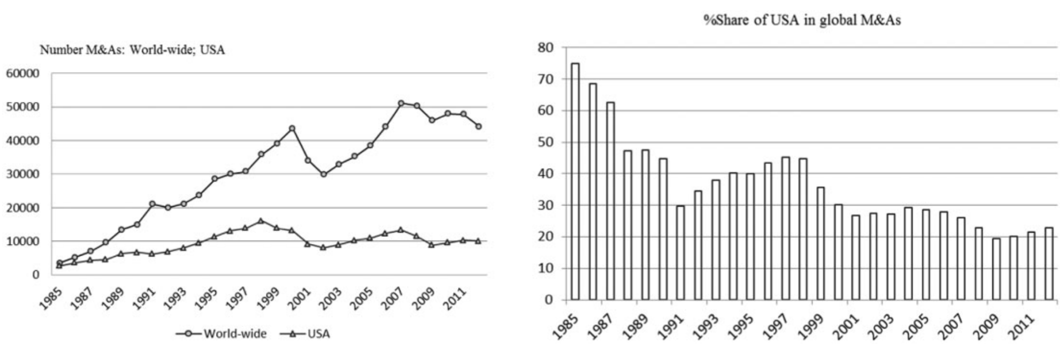


Figure 1. *M&A deals worldwide and in USA (number of deals on left pane, and the US share in worldwide deals on right panel): 1985–2012.*

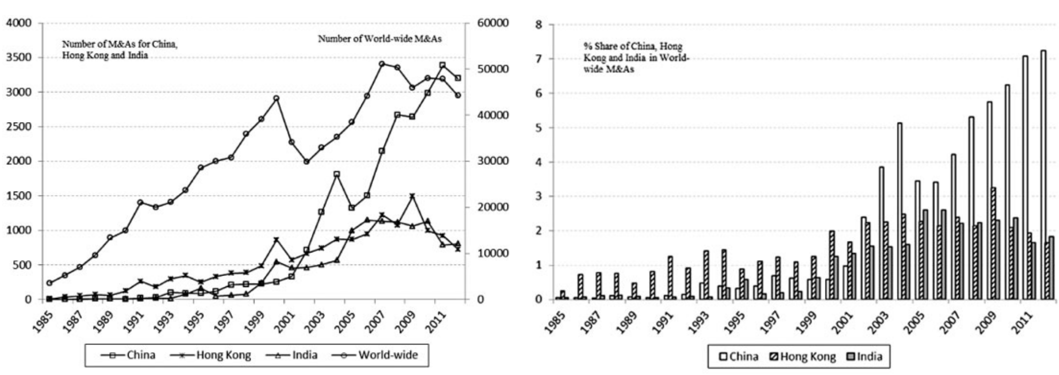


Figure 2. *M&A deals worldwide, in China, Hong Kong, and India: (1985–2012) (total number, left panel and % of global M&A deals, right panel).*

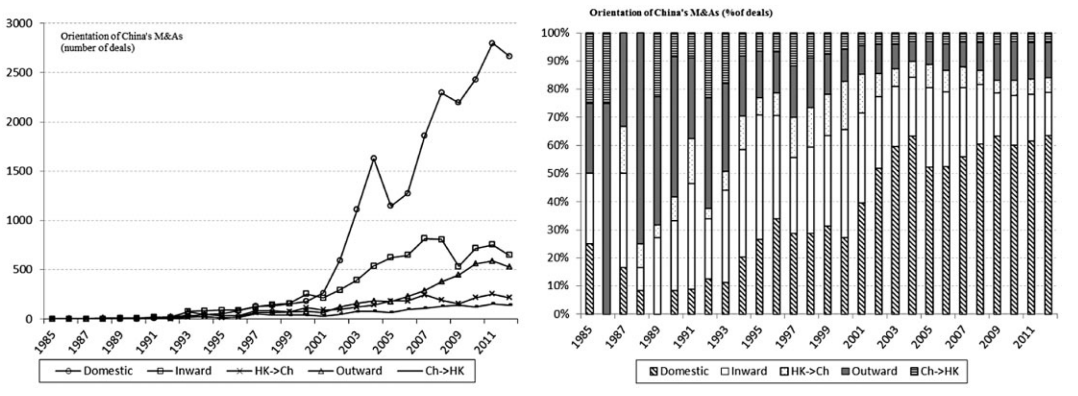
registered a rapid growth. As we will see later in greater detail, this mainly resulted from a surge in domestic M&A activities. From 2003 onwards, China started to follow more closely the worldwide trend again (albeit with a dip in 2005 and a peak in 2011).

During the first half of the 1980s M&A deals involving firms from China, Hong Kong, and India were either absent or limited. In China, the year 1993 marked an important turning point in the number of M&A deals. From 29 in 1992, the number of M&A deals increased more than threefold to 99 in 1993 and has continued to grow ever since. The 2000s marked a new phase in which M&As rose rapidly, with the number of deals involving Chinese firms averaging about 2,000 every year. The growth momentum continued, and by 2011 the number of M&A deals was close to 3,400. The 2000s also marked a major shift from the past in regard to the relative number of M&As from China and Hong Kong. Until 2002, Hong Kong dominated Greater China's M&A deals. China has since emerged as the leader: In 2012 it had more than four times the number of M&As of Hong Kong.

In India, as in China, M&A activity was low until the end of the 1980s. During the 1990s, and especially the late 1990s, the number of M&A deals involving Indian companies increased significantly. The average number of deals from 1993–2002 was 215, still lower than the 235 deals for China and the 457 deals for Hong Kong. In 2005 (and in 2006) for the first time India's M&A deals overtook Hong Kong's, only to be outmatched by an even greater increase in China's M&A deals. Of course, the size of the Chinese economy warrants a greater number of deals involving Chinese firms. In sum, China, Hong Kong, and India increased their combined share in worldwide M&As from less than 1 per cent in 1980 to 10 per cent by 2012.

Orientation of China's M&As – Figure 3 shows the orientation of China's M&A activity. In the figure, we have distinguished among inward M&As in terms of inward M&As excluding those originating in Hong Kong, and those in which firms from Hong Kong acquire firms from China. A similar distinction has been made for outward M&As from China. We have done so to take into account the significant economic linkages, which existed even prior to their unification in 1997, between Hong Kong and China.

For the period under consideration (1985–2012), the M&A activities of Chinese firms were 56 per cent domestic, 28 per cent inward, and 16 per cent outward oriented. There are however some major differences in the composition of M&As during various stages of China's



Note: Inward: excluding inward M&As from Hong Kong; Outward: excluding outward M&As to Hong Kong; HK→China: outward M&As from Hong Kong to China; China→HK: outward M&As from China to Hong Kong.

Figure 3. *Orientation of China's M&A activity (number of domestic, inward, and outward M&As on left panel, and their percentage share in total Chinese M&A activity on right panel).*

development. During the 1990s most of the M&A deals were inward oriented (averaging about 44% during 1993–2002). This is because the Chinese economy had just been opened up for international competition and foreign MNCs were keen to tap into the Chinese market by the acquisition of Chinese firms. Hong Kong emerged as the most important acquirer after its unification with China in 1997:[4] between 1997 and 2000 about 30 per cent of the inward M&As to China originated in Hong Kong. During the 2000s Hong Kong's share of the inward M&As to China reduced to less than 30 per cent because of the significant increases in inward M&A activity undertaken by companies from the rest of the world (Tang & Metwalli 2003). A major trigger for this could be China's admittance to the WTO in November 2001, which implied further progress in liberalisation.

Overall, we witness a rising wave of domestic M&As during the 2000s. This wave reflects major policy changes aimed at reorganising China's state-owned enterprises (SOEs). Of particular relevance is the 1997 reform programme known as *zhuada fangxiao* ('grasp the big, enliven the small') approved by the central government at the Fifteenth Congress of the Chinese Communist Party. A key aspect of this strategy was the formation of enterprise groups (*qiye jituan*) by combining large SOEs, in order to reap the benefits of economies of scale and international competitiveness. This reorganisation continued to take place into the twenty-first century (Smyth 2000). The 2000s therefore witnessed a substantial increase in domestic M&As; for the first time they dominated the overall M&As (accounting for on average more than half of all China's M&A deals). During the last years, the share of domestic M&As in China seems to stabilise.

Outward M&As showed an upward trend as well: the average number of outward M&As increased from about 95 in 1993–2002 to about 293 in 2003–2007 and 637 in 2008–2012. An important reason for this increase in China's outward investment was the significant government support under the 'go global' initiatives that started in 1999 (Buckley *et al.* 2007; Luo & Tung 2007). However, the growth in absolute terms in domestic and inward M&As was substantially higher than the increase in outward M&As. Thus, the relative contribution of outward M&As to overall M&As declined between 1993–2002 and 2003–2007, from 27 per cent to 12 per cent, but made a slight recovery to about 16 per cent during 2008–2012. When looking at the composition of China's outward M&As, we notice that during the 1990s, and especially the years immediately following unification, about 30 per cent of them were directed toward Hong Kong. However, in the 2000s Hong Kong's share of overall Chinese outward M&As registered a decline. This is a reflection of the policy changes associated with China joining the WTO. At the time of China's accession to the WTO in 2001, Premier Zhu Rongji announced the 'going abroad' strategy in the 10th five-year plan (2001–2005). Increasing outward investment became a declared policy of China in view of the country's expanding foreign-exchange reserves, and the growing domestic competitive pressures resulting from, as well as the opportunities for growth offered by globalisation. Outward FDI is now an integral part of China's economic development strategy, and the government actively encourages and assists large domestic enterprises to carry out overseas investments with a view to the acquisition of foreign technologies and natural resources and the penetration of foreign markets (Cheng & Stough 2007).

Orientation of India's M&As – For the period 1985–2012 as a whole, India's M&A activity broadly resembles that of China with domestic M&As accounting for 52 per cent, inward M&As 32 per cent and outward M&As 16 per cent of the total M&A activity. Also, as in China, there was no significant domestic, inward, or outward M&A activity in the 1980s in India. This can be explained by the fact that acquisitions were not allowed in India until the early 1990s (Kale 2004). However, in 1991 the liberalisation phase was initiated and this phase has continued to the present day (Elango & Pattnaik 2007). During this phase many business restrictions have been removed, the state sector has become largely privatised, and large areas of the domestic market have been opened up for both domestic and foreign competition (Kale 2004; Elango & Pattnaik 2007). This has given companies the freedom, but also the

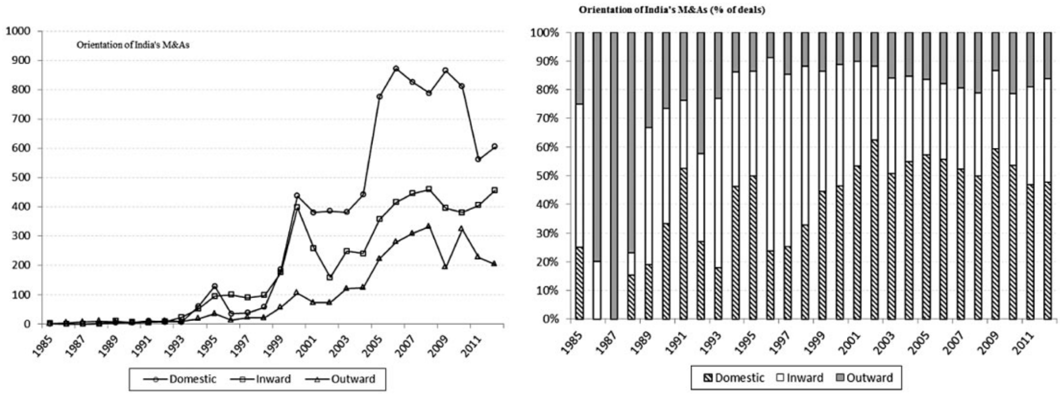


Figure 4. *Orientation of India's M&A activity (number of domestic, inward, and outward M&As on left panel, and their percentage share in total Indian M&A activity on right panel).*

need, to enhance their competitive position by means of mergers and acquisitions both domestically and across borders (Kale 2004; Yiu *et al.* 2007). Consequently, we have witnessed an increase in domestic, inward, and outward M&A activities since the early 1990s.

First, in the aftermath of the liberalisation of the economy in the early 1990s, the number of Indian companies acquired by foreigners increased substantially, from eight in 1992 to 398 in 2000.[5] The absolute number of inward M&As continued to increase up to 2008, but its share of overall M&As started to decline from 1997 onward (see Figure 4, right panel). This was a result of the substantial increase in the number of domestic M&As and outward M&As. In particular, during 2003–2012 nearly 53 per cent of India's total M&As were domestic and 18 per cent were outward. In fact, overseas acquisitions by Indian firms during the period 2003–2010 (with the exception of 2009) were exceptionally high, especially in light of the long protection they enjoyed until only a decade earlier. This increase in outward M&As has been facilitated by a policy change in 2000 that allowed Indian companies to undertake cross-border investments without prior approval of the Reserve Bank of India (Luo & Tung 2007).

Destinations of outward M&As – When we look at the destinations of outward M&As we find important differences between China and India (Figures 5 and 6). While China's overseas M&A deals are focused on Asia, outward M&As of Indian firms have a predominant focus on Europe, followed by Asia and North America. This can be explained by the fact that India has close historical ties with the West, especially the United Kingdom; of the European target firms 44 per cent are from the United Kingdom. Indian firms have also leveraged their English language skills extensively (UNCTAD 2006).

STRATEGIC TECHNOLOGY ALLIANCES

Until about 25 years ago many firms in the developed world were still convinced they could go it alone, since they were used to doing everything in-house. Firms simply did not consider working together with other firms, certainly not in fields related to their core competencies. The prevailing wisdom in the developing world was not much different, except that technology purchases of a one-off nature were deemed the right approach. In this approach, cost considerations were more important than long-term technological relationships with foreign partners and learning from such relationships. However, in the last 25 years we have witnessed a major change in the business environment globally. Because of the dynamic nature of economic and technological change and the ongoing globalisation process no firm can go it alone, not even major players such as IBM or Microsoft. Today, strategic technology alliances are not an arbitrary option but

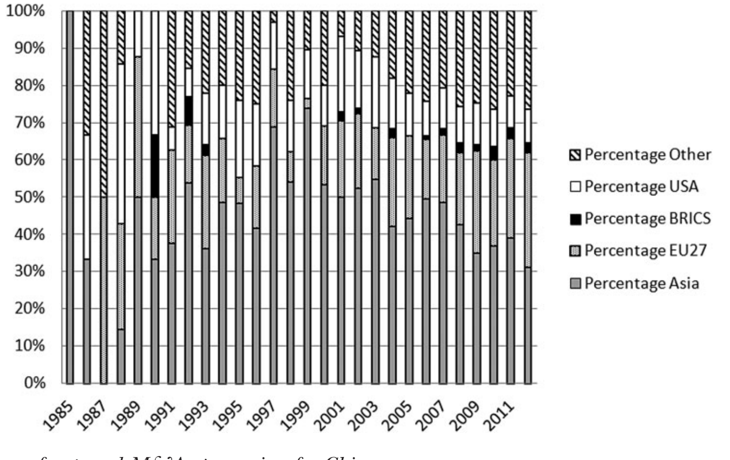


Figure 5. *Percentage of outward M&As per region for China.*

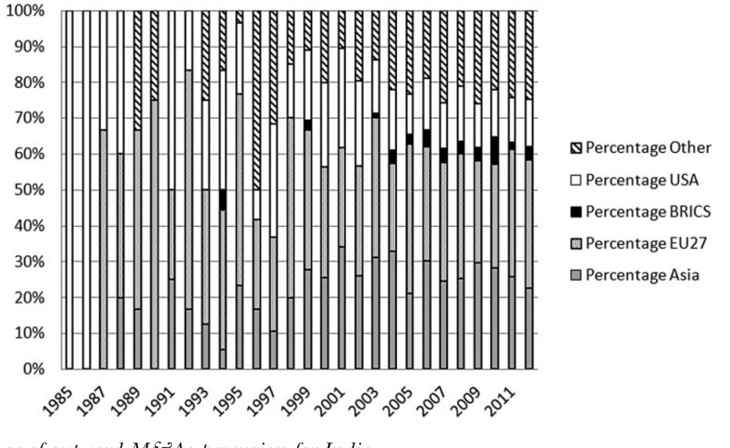


Figure 6. *Percentage of outward M&As per region for India.*

a necessity to improve a firm's competitive position in the market.

Co-operative agreements have been in existence since the 1960s, but their number at that time was rather small. During the mid-1970s the number of strategic technology alliances rose slightly, but their importance could still be considered marginal. As Figure 7 indicates, from the mid-1980s through the 1990s there was a rapid acceleration in the number of alliances established (see also Hagedoorn 2002). Firms started to use many different forms of alliances, ranging from so-called contractual agreements such as joint-development agreements to equity arrangements such as joint ventures (Hagedoorn 1996). During much of this period, firms from the United States, the global technological leader, were involved in nearly two-fifths of all global deals. We witness a drastic fall in the number of alliances coinciding with the US economic recession of 2001, with a slight upturn in the period 2005–2008 and the last two years (2011–2012).

The surge in alliances worldwide in the late 1980s coincided with the opening up of hitherto protected markets in many parts of the less-developed world, including China and India. Economic liberalisation has reduced governments' ability to control technology transfer, and at the same time it has increased the competitive pressures on domestic firms. This has had the following consequences. First,

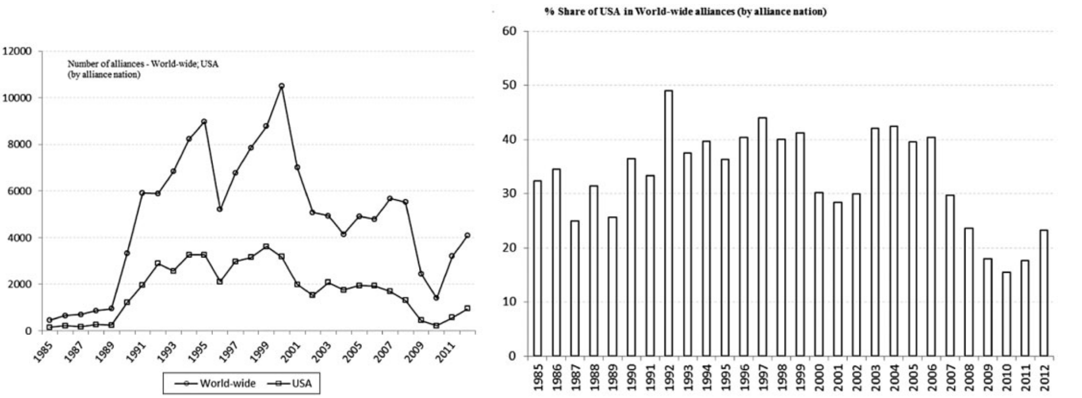


Figure 7. *Number of alliances worldwide and in USA (left panel), and the US share in worldwide alliances (right panel): 1985–2012.*

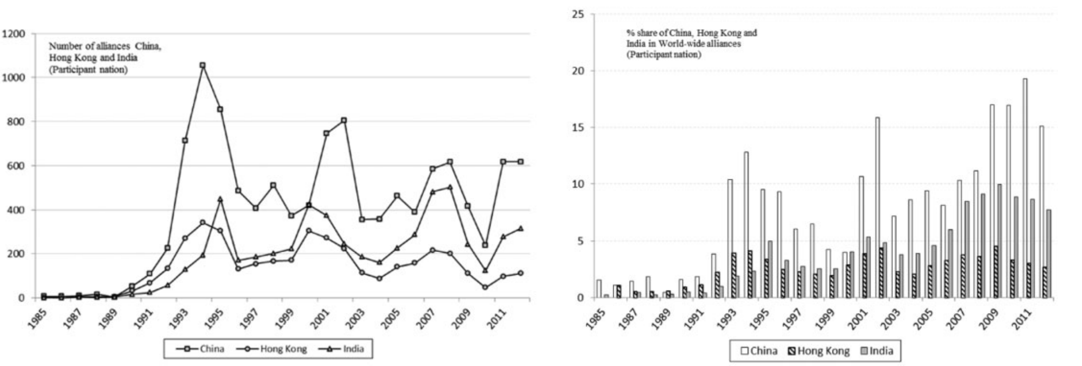


Figure 8. *Alliances in China, Hong Kong, and India: (1985–2012) (total number, left panel and percentage of global alliances, right panel).*

firms have been forced to upgrade their technologies continuously and to learn dynamically how to meet the ever-changing demands of the marketplace. Second, firms have had to devise novel technological acquisition strategies, such as strategic technology alliances. In the following, we explore the trends and patterns of the alliance activities of Chinese and Indian firms. We follow a similar approach as for the M&As.

Trends in the alliance activities of firms from China, India, and Hong Kong: 1985–2012 – The alliance activity of Greater China is about three times that of India. While Greater China has undertaken an average of 590 alliances per year (441 for China and only 149 for Hong Kong), Indian firms were involved in only 211 alliances per year (see Figure 8). In contrast to their lead in the number of M&As over Chinese and Indian firms, the alliance activity of Hong Kong firms was relatively low, with a maximum share for some years of just above 1 per cent of the global alliances.

Figure 8 also reveals that alliance activity by Indian firms, although increasing, is still quite low on a global scale. On average, about 4 per cent of the global alliances come from Indian firms. China appears to be doing better; the share of Chinese firms in global alliances reached a peak of over 15 per cent in some years with an average of under 10 per cent in the last few years. However, we find that the two countries display a similar trend in alliances over time, with a first peak around 1994 for China and 1995 for India, and then a trough in 1999 for China and 1996 for India. Both coun-

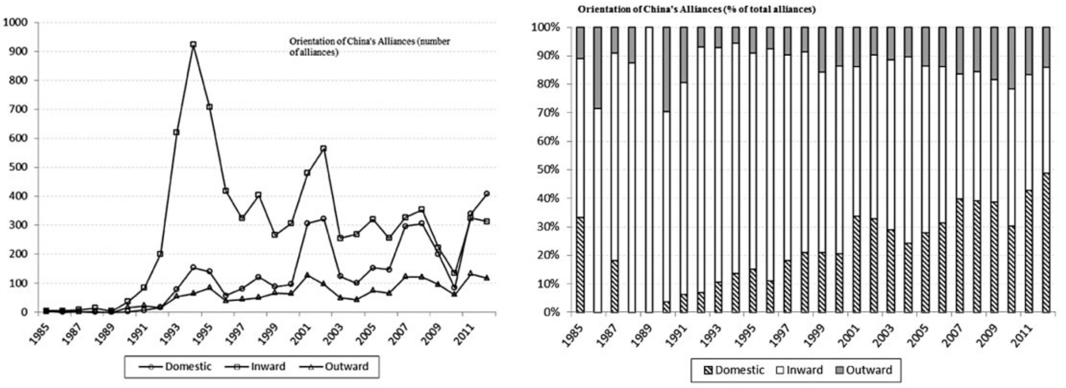


Figure 9. *Orientation of China's alliance activity (number of domestic, inward, and outward alliances on left panel, and their percentage share in total Chinese alliance activity on right panel).*

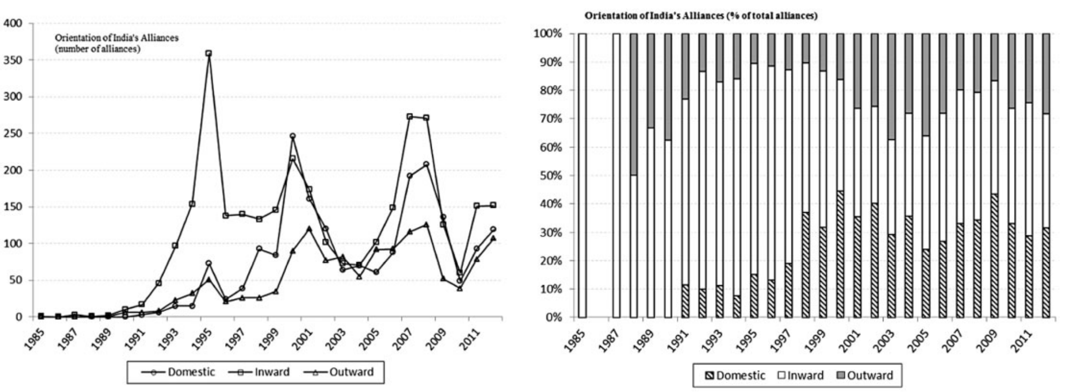


Figure 10. *Orientation of India's alliance activity (number of domestic, inward, and outward alliances on left panel, and their percentage share in total Indian alliance activity on right panel).*

tries then increased their alliance activities, but both reached their next low point in 2003, probably as a result of the worldwide economic downturn following the collapse of the internet-bubble. A recovery starting 2006 was brief due to the 2008 global economic crisis, but during the last two years we witness a new wave of alliances by Chinese and Indian firms. For more insights, we now look into the orientation of alliances in the three regions studied.

Orientation of the alliance activities of Chinese and Indian firms: 1985–2012 – Figures 9 and 10 show the domestic, inward, and outward alliance activities of Chinese and Indian firms. From 1985–2012, inward alliances dominated the total number of alliances for Chinese and Indian firms.

Overall, 61 per cent of Chinese alliance activity is concentrated in inward alliances. Only about 27 per cent of alliances can be labelled as domestic and about 12 per cent as outward. Until China's accession to the WTO in 2001, foreign firms wishing to operate in China were required to enter into joint-venture partnerships with local firms. While Sino-foreign alliances might therefore appear to be marriages of necessity rather than choice, what we notice is a persistence of such alliances within China during the 2000s. Although the inward China alliances decrease as a percentage of total China alliances, in absolute numbers we witness a stabilisation. This suggests that Chinese firms, whose international aspirations hinge significantly on such partnerships, bring apparently vital assets to the alliance relationships. The

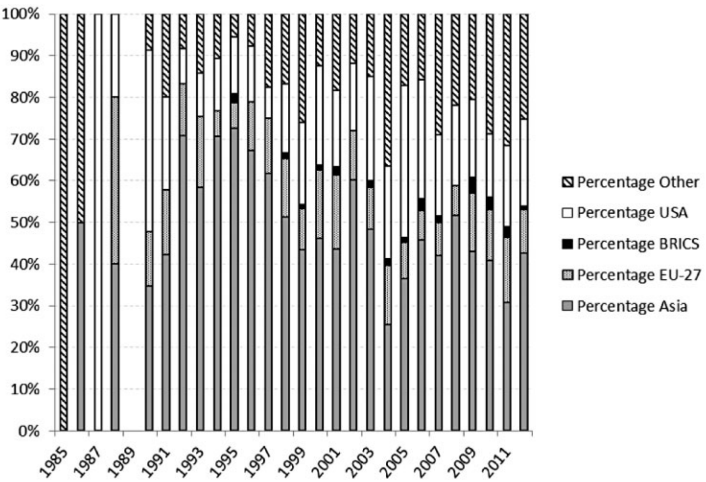


Figure 11. *Percentage of outward alliances per region for China.*

domestic China alliances start playing an ever-increasing role in the overall alliance formation; in 2011 and 2012 the number of domestic alliances surpassed the number of inward alliances.

Indian alliance activities are also dominated by inward alliances. They account overall for 49 per cent of the total Indian alliance activity; domestic alliances (30%) come second, and outward alliances (21%) third. In sharp contrast, for Hong Kong firms, outward alliances (70%) were the largest component of overall alliance activity, followed by inward (17%) and domestic (13%).

Over time, we notice important changes in the orientation of the alliance activities of India and China. Since 1985 inward alliance activity has, with a few exceptions, consistently been the most important form of alliance formation in both countries. By the 1990s outward alliances had started to gather momentum. Since the late 1990s India in particular has experienced a substantial increase in outward alliances. From 2003–2006 the number of outward alliances from India surpassed that of China: the average number of alliances was 81 for India, 58 for China, and 91 for Hong Kong. For most of the 2000s in India, the proportion of outward alliances fluctuated between 16 per cent and 37 per cent. In fact, in 2003 India's outward alliance activity was higher than its inward alliance activity. However, for the rest of the 2000s the inward alliance activity was higher than the outward alliance activity. In percentage terms, during much of the 2000s inward alliances is about 51 per cent for China and 41 per cent for India, while domestic alliance formation comes second for both countries at about 35 per cent. The two countries score noticeably different in terms of outward alliances, with China scoring 14 per cent and India 24 per cent. China, however, featured more outward alliances than India in absolute numbers, over a long period of time.

Destination of outward alliances – Looking at the regional composition of outward alliances, we see that most of Greater China's partners are based in Asia (see Figure 11); the same was observed also for this country's M&A activity. Although Asia has become relatively less important over the years, it still accounts for about 40 per cent of Greater China's outward alliance activity. While until 2006 USA was the second most important focus region for Greater China's outward alliances (accounting for between 20% and 30% of the annual alliances), since then partners from other regions ('other') have become more important.

For India the picture is slightly different (see Figure 12). In the early 1990s Asia has been India's dominant focus region and now has a share of around 35 per cent. However, from the mid-1990s Indian firms started focusing more

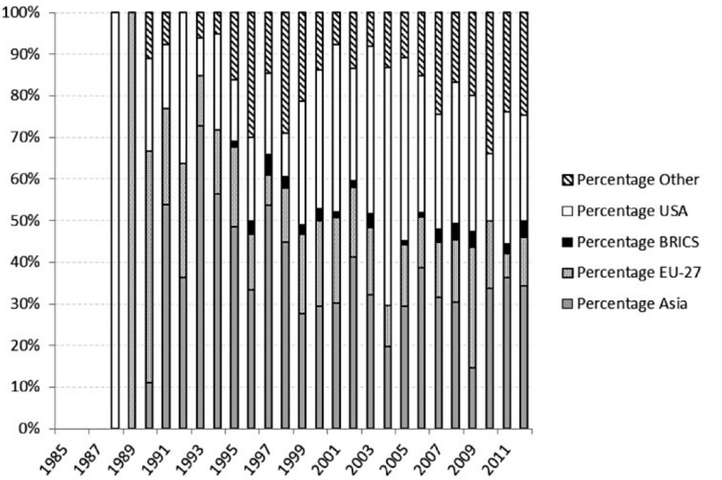


Figure 12. *Percentage of outward alliances per region for India.*

and more on the US and the EU, and this trend continued until the first half of the 2000s. Although still important focus areas for Indian firms, in recent years the EU and to a lesser extend the US are losing ground to Asia and, to a lesser extent, to the 'other' category. Presently Asia is the most important focus market for India's outward alliance activity, followed by the US and 'other'. Firms from China and India carry out very little alliance activities in the upcoming BRICS markets that include each other. An explanation could be that their outward alliances are generally set up to learn from other firms. Inward alliance numbers from BRICS partners too are very small; as such alliances are to a large extent initiated by the outside partners, especially established MNCs from more advanced economies, which are looking for market expansion.

Reasons for the difference in focus between China and India when it comes to outward alliances might be cultural as well as historic. For China, similarities between its internal environment and that of Western firms are likely much smaller compared to those for India. Given its colonial heritage and the historic ties with the West, Indian firms from very early years formed partnerships with their counterparts in Europe and the USA. On the other hand only since the mid-2000s firms from China began to focus on alliance relationships with Western firms. Until then, their attention was directed particularly towards their Asian cousins. The differences in the outward alliance pattern between the two are getting smaller. However, China's focus on Asia is still stronger than is the case for India.

STATISTICAL ANALYSIS AND FURTHER FINDINGS

We employed a number of ANOVA tests to examine whether the group means of M&A and alliance activities among the three countries differ significantly from each other. The ANOVA tests indicate that the group means of both the total number of M&As as well as the number of inward M&As do not significantly differ from each other. However, there is a significant difference with respect to outward M&As (F-ratio is 3.90 and significance is 0.02) and domestic M&As (F-ratio is 4.64 and significance is 0.01). Given that the variances of the groups with respect to domestic M&As are significantly different, we also applied the so-called Welch and Brown-Forsythe statistics, which show that we can reject the null hypothesis with 95 per cent certainty (there is no difference in the mean scores) for domestic M&As. However, this result does not tell us which groups are significantly different from each other, so we used the post hoc test result of Tukey for outward M&As and Games-Howell for domestic M&As (which does not assume population variances are equal). The tests indicate that Hong Kong and India are significantly different with respect to outward M&As (significance is 0.018) and China is significantly different from Hong Kong and India with respect to domestic M&As (significance is 0.08 in both cases, so the mean difference is significant at the 0.1 level; see Table 1). More specifically, we find that Hong Kong has significantly more outward M&As than India (there is no difference between China and Hong Kong and between China and India). With respect to domestic M&As, China has significantly more domestic M&As than Hong Kong and India (there is no significant difference between Hong Kong and India).

We carried out similar analyses for alliances (see Table 2). The ANOVA tests indicate that the group means significantly differ from each other with respect to the total number of alliances (F-ratio 14.57, significance 0.00), inward alliances (F-ratio 25,77, significance 0.00), outward alliances (F-ratio 6.99, significance 0.002) as well as the domestic alliances (F-ratio 13.0,1 significance 0.00). Given that the variances of the groups with respect to all variables are significantly different we again applied the so-called Welch and Brown-Forsythe statistics, which confirmed that we can reject the null hypothesis with 95 per cent certainty for every alliance variable. Again, we used the post hoc test result of Games-Howell. This test indicates that there is a significant difference in the total number of alliances between China and India (significance is 0.004) and China and Hong Kong (significance is 0.000). In particular, we find that China has significantly more alliances than India and Hong Kong (there is no significant difference between India and Hong Kong). With respect to inward alliances all three countries significantly differ from each other (significances are 0.001, 0.000 and 0.000). Specifically, China has significantly more inward alliances than India and Hong Kong and India in turn has significantly more inward alliances than Hong Kong. And finally, Hong Kong is significantly different from China and India in terms of outward alliances (significance is 0.032 and 0.007) as well as domestic alliances (significance is 0.000 and 0.002). With respect to domestic alliances, India and China also differ significantly from each other at the 0.1 level (significance 0.07). While Hong Kong has significantly more outward alliances than India and China, it has significantly less domestic alliances than the other two countries. With respect to domestic alliances India has a significantly lower number of alliances compared to that of China.

Table 1. *Group means of outward M&As and domestic M&As for the three countries: China, India and Hong Kong.*

Country	Outward M&As	Domestic M&As
China	153.32	752.68
India	100.57	309.89
Hong Kong	216.39	328.14

CONCLUSIONS AND DISCUSSION

This paper aims to show the internationalisation patterns of Indian and Chinese companies in terms of their international mergers and acquisitions (M&As) and strategic technology alliances. These reflect, to an important extent, the internationalisation of their corporate technological activities. The main question that this paper addresses is whether companies are gradually becoming more international in terms of these external organisational modes. We identified some major trends and patterns of these modes for

Table 2. *Group means of alliances (total, inward, outward and domestic) for the three countries: China, India and Hong Kong.*

Country	Total alliances	Inward alliances	Outward alliances	Domestic alliances
China	409.14	291.04	58.07	129.86
India	196.54	113.11	48.71	69.96
Hong Kong	138.54	24.64	100.21	18.71

the period 1985–2012, which represents the phase of economic integration of mainland China and India with the global economy. We treated mainland China (China) and Hong Kong as separate entities to allow a direct comparison between China and India, both of which experienced an interventionist policy regime in the past but have embraced market-oriented principles since the 1980s. We linked major aspects of the globalisation patterns of Chinese and Indian firms to domestic and global economic circumstances and policy initiatives.

Overall, Greater China and India are emerging as important players in worldwide M&As and alliances; the traditional dominance of the US in both these activities is on the decline. When comparing the two regions we find that both M&A activity and alliance activity are about three times larger in Greater China than in India. Our analysis of the patterns of M&As and alliances revealed important similarities and differences between the two countries. For both countries we see all forms of M&As increase over the period under study. The domestic M&As form the largest part of M&As for both China and India, followed by inward M&As. Outward M&A activity for both countries only took off during the 1990s and increased considerably for both during the 2000s (2000–2012). India seems to be more outward looking when it comes to M&As compared to China.

Looking at alliances for both countries, we view a more or less similar pattern, albeit with some country differences. For both countries inward alliances are still the most important form of alliance formation, although the number of inward alliances is declining over the years. Domestic alliances form the second largest form of alliances followed by the outward alliances. However, if we look at the last five years of our analysis period, China has almost as many domestic alliances as inward alliances. For India the outward alliances seem to be of more importance than for China, although in absolute numbers China has more outward alliances than India. China seems to be focusing much more on its domestic alliances. Overall we can argue that India seems to be much more outward looking both for M&As and alliances than China.

Our analysis revealed that the outward-oriented M&A and alliance activities from Greater China and India have certain distinctive target regions: Greater China undertakes both its M&A activity and its alliance activity mainly in Asia, while India focuses much more on North America and to a lesser extent Asia. Increasingly however Greater China is shifting its attention away from Asia toward advanced countries. Recently both countries increased their global reach by focusing more of their M&A and alliance activity on the 'other' category.

One reason for the difference in focus regions between China and India might be that cultural similarities or the lack thereof with partner countries play a prominent role in their outward-alliance activities. The similarities in cultural and corporate environment between China and Western countries are most likely lower than those for India. India, presumably because of its colonial heritage, is more focused on Europe and the USA, whereas China is more focused on its cousins in Asia.

Finally, employing ANOVA we found that the magnitude of China's alliances is significantly higher than India's and Hong Kong's. Second, the number of domestic alliances as well as domestic M&As is also much higher in China than in the other two countries. Third, more foreign companies are investing in China and India via alliances compared to in Hong Kong. In terms of the relative distribution of alliances, India is more focused on outward alliances than China.

From this paper a number of policy implications can be derived. First, the more prominent position of India and, in particular, China in the world economy has enabled them to attract new sources of (foreign) knowledge and facilitated their domestic firms to enter global markets. This seems to be particularly important because both countries are determined to move into the next stage of evolution in which innovation is of key importance. As emerging economies shift from low-cost activities to innovation-orientated activities they generate higher profitability in the value chain. In order to achieve this goal, firms have to tap into external knowledge sources through the use of alliances and M&As that have been shown to generate the highest returns for knowledge development (De Man & Duysters 2005). Catching up with more sophisticated Western economies and entering the next stage of development is only possible by moving away from a pure focus on internal development, reverse engineering and licences towards the use of more sophisticated knowledge acquisition modes like M&As and strategic alliances. Internal development of all the required capabilities and knowledge is simply too expensive, too risky and almost impossible for even the largest organisations (Chesbrough 2003). Companies from emerging economies can benefit from the more advanced knowledge of their global counterparts and speed up the knowledge catching-up process by engaging in international knowledge transfer activities. Governments, in order to fulfil their innovation aspirations, should therefore facilitate global technology sourcing (Goldstein 2007) by means of M&As and strategic alliances. In addition, governments should offer appropriate incentives for attracting foreign firms that are aiming to outsource their knowledge intensive functions to lower-cost, engineering oriented countries like China and to a lesser extent India. In this respect, generous tax and investment packages might be needed to persuade foreign companies to locate their R&D facilities in the respective countries. Traditional policies, focused solely on production and investment, should be replaced by innovation-centred policies that embrace international knowledge sharing and knowledge acquisition (M&As).

Overall we can conclude that alternative organisational modes such as strategic technology alliances and mergers and acquisitions have become central to the internationalisation strategies of the companies of Greater China and India. Firms from these emerging economies are using M&As and alliances domestically as well as internationally to strengthen their position in world markets. Somewhat surprisingly this phenomenon has attracted only limited attention in the academic literature. So far, little is known about the specific nature and magnitude of these alternative governance modes. We hope this study enriches the empirical basis for understanding the strategies of companies from major emerging markets.

Notes

1. One partial exception is the study of Sun *et al.* (forthcoming) who compare cross-border M&As of Chinese and Indian MNEs. However, they recognize that much more research is needed on the differences between domestic and international M&As undertaken by Chinese and Indian firms.
2. This is because most mergers are in fact acquisitions with one company controlling the other (UNCTAD 2000).
3. The value of the transaction is reported in only about 50 per cent of global transactions, so our preferred indicator of M&A activity is the number of deals.
4. True, from a political point of view, M&As originating in Hong Kong and heading to China from 1997 are domestic. However, we use the term inward in view of the significant differences between China and Hong Kong as two economic entities.
5. In fact, the composition of foreign direct investment (FDI) significantly changed after liberalisation. Prior to the reforms, FDI arrived mainly in the form of greenfield investments, but thereafter M&As began to emerge as a major component of FDI. For example, in 1997 M&As accounted for nearly 40 per cent of FDI flows into India (Kumar 2005).

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