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CROSS-BORDER MERGERS AND ACQUISITIONS (M&As) IN DEVELOPING ASIA: THE ROLE OF FINANCIAL VARIABLES

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Cross-border Mergers and Acquisitions (M&As) in Developing Asia: The Role of Financial Variables

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Abstract

This paper examines cross-border M&A activities in a large panel which includes many developing Asian economies. How important are financial drivers of M&As in the region, particularly financial risks such as market risk, credit risk, and liquidity risk? How significant are intra-(developing) Asian M&As and are there differences between intra-regional M&A transactions and M&A purchases by extra-regional sources in developing Asia? These are among the issues explored in this paper using a novel dataset of bilateral M&A purchases in developing Asia over the period 2000-2007.

Keywords: Developing Asia, Distance, Finance, Foreign Direct Investment (FDI), Gravity Model, Greenfield investment, Mergers and Acquisitions (M&As), Risks

JEL Classification: F21, F23, F36

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1. Introduction

The global outward FDI stock which stood at US$ 14 million in 1970 increased over 140 times to almost US$ 2,000 by 2007 (Table 1). Of importance also is the fact that a large part of the upsurge in global FDI has been due to mergers and acquisitions (M&As) as opposed to "Greenfield" FDI (Evenett, 2004). According to UNCTAD (2000, 2007) there were almost 7000 M&A deals globally in 2006 valued at around US$ 880 billion, having peaked in 2000 at almost US$ 1200 billion.[1] In comparison, there were a negligible number of deals pre 1980 and a relatively modest US$ 150 billion worth of M&A deals in 1990 (Figure 1). Also noteworthy is the growing significance of developing Asia in these cross-border M&As, both as sources of finance as well as destinations of investments (UNCTAD, 2007). These cross-border M&A flows have deepened the economic integration of developing Asia with the global economy. Despite the rising prominence of M&As, the literature on the subject remains rather limited in general, but particularly with regard to developing Asia.[2] What are the main drivers of M&As in the region with particular emphasis on the role of finance, including financial risks (market risk and liquidity risks)? Are there differences between developing Asia's M&A transactions with the rest of the world versus intra-regional M&As? These are some of the issues explored in this paper.

The paper is organized as follows. Section 2 discusses general definitions of M&As and data sources and trends in M&As into Asia at the aggregate level. Section 3 conducts a simple empirical exercise on the determinants of M&As in these economies using an augmented gravity-type model framework with a novel dataset of bilateral M&A purchases in developing Asia over the period 2000-2007. As noted, particular emphasis is paid to the roles of financial drivers of M&As in the region, particularly financial risks. Section 4 concludes the paper.

2. Cross-border M&As in Developing Asia

How significant is developing Asia in cross-border M&As; which countries specifically are the most prominent players; and what is the extent of intra-regional M&A transactions? These are the questions explored here. We define developing Asia as most of East, Southeast and South Asia excluding Japan.[3]

[1] UNCTAD (2007) notes that in 2006 there were 172 mega deals (each worth more than US$ 1 billion in transaction value) constituting a total value of $583 billion or two-thirds of the total value of global cross-border M&As. The global credit crunch appears to have sharply curtailed the number and value of M&A activities domestically as well as globally (UNCTAD, 2008), at least temporarily. We analyze the impact of liquidity conditions on M&A activities to developing economies in Section 3 of this paper.

[2] For an in-depth discussion of bilateral FDI flows to developing Asia, see Hattari and Rajan (2008a,b). For recent academic studies on the determinants of cross-border M&A activity, see di Giovanni (2005) who focuses on financial and macroeconomic determinants and Rossi and Volpin (2005) who emphasize the importance of accounting standards and stronger shareholder protection. In contrast to the conventional international economic literature, there has been a much more active literature in finance as well as management on valuation and performance of M&As both cross-border as well as domestic.

[3] See Filobok (2004) for a discussion of cross-border M&As involving Japan.

2.1 Aggregate M&A Sales to and Purchases from Developing Asia

Aggregate M&A data are available from UNCTAD which uses data from Thomson Financial and focuses only on transactions with over 10 percent equity stake (to be consistent with the definition of Foreign Direct Investment or FDI). We concentrate here only on M&A deals that are completed rather than announced.

Table 2 highlights that the Triad (the EU, Japan and the United States) continue to dominate, both as sources and destinations of M&A deals. However, it is interesting to note that in 2003-06 the share of developed economies' M&A purchases (sales) declined from 96.5 (95) percent in 1987 to 87 (83) percent by 2006. This decline was largely reflected in a rise in developing Asia's share. The region is home to more cross-border M&As than other regions, both in terms of the US dollar amount and number of deals. Figures 2 and 3 respectively highlight trends in M&A purchases and sales involving developing Asia.

Table 3 summarizes cross-border M&As in Asia – in term of sales and purchases – between 1990 and 2006. Cross-border M&A sales and purchases involving developing Asia grew by almost sixteenth-fold from around US$ 10 billion in 1990 to US$ 150 billion in 2006. At a general level, UNCTAD (2007) has noted that buoyant global economic conditions and the liberalization of most of the developing Asian economies in the early and mid 1990s led to a signficant wave of M&As globally and regionally. However, there was a marked increase in M&A sales in the region following the crisis of 1997-98, with the average of M&A sales jumping threefold from US$ 7 billion between 1994-96 to US$ 21 billion between 1997-99. Clearly this spike in sales was a combination of fire-sales possibly due to the depressed asset values compared to the pre-crisis period, as well as the simultaneous liberalization of foreign ownership regulations in crisis-hit Asian economies (Mody and Negishi, 2001). Not surprisingly, purchases rose sharply particularly in the three economies hit by the crisis, viz. Indonesia, Korea, Thailand.[4]

Interestingly, Hong Kong also experienced a significant jump in M&A sales. Apart from purchases by outward bound Chinese companies (discussed below), Hong Kong's currency board arrangement necessitated that the bulk of the adjustment to the external shock took place via domestic price adjustments. Thus it faced a rather deep domestic asset price deflation. In contrast, M&A purchases by developing Asian firms remained subdued between 1998 and 2004, with Singapore being a noteable exception. The city state which came out of the crisis in fairly good condition used the opportunity to aggresively expand its overseas purchase of assets both within the region and extraregionally. M&A purchases from Singapore averaged just above US$ 1 billion annually in the first sub-period and close to

[4] As Mody and Negishi (2001) note: "(t)he new wave of M&A was triggered by important policy changes following the crisis, particularly in Korea and Thailand. Some people expected the mergers and acquisitions to speed up much-needed corporate and financial restructuring and, hence, facilitate a faster economic recovery….Recent FDI based on mergers and acquisitions reflects foreign-based firms' entry into services (nontradable) sectors, whereas Greenfield FDI was predominantly focused on manufacturing of goods for export and also of domestic substitutes for imports. Much of the East Asian M&A activity has been in sectors such as wholesale and retail trade, real estate, and financial services." We do not examine the sectoral distribution of M&A activities in this paper.

US$ 8 billion in the second sub-period. These investments were by Singapore companies, foreign multinationals based in Singapore, as well as by Singapore's sovereign wealth funds (SWFs), Temasek and Government of Investment Singapore (GIC).[5] Apart from Singapore, Hong Kong and China have been the top developing economy sources of M&A in recent years.

2.2 Intra-Regional Asian M&A Deals: A First Look

Having offered an overview of aggregate M&A deals to Asia, we next analyze bilateral M&A deals in developing Asian economies to understand the signficance of intra-(developing) Asian M&As. M&A data are compiled by various private companies. For the purposes of this paper we draw on the Zephyr database compiled by Bureau Van Dijk Electronic Publishing available via the *Economic Intelligence Unit's World Investment Service*.[6] The data collected by Zephyr involves any M&A with over 2 percent equity.[7] However, the Zephyr data available via the *World Investment Service* conform to the 10 percent threshold to be considered FDI (rather than portfolio flows) and is therefore preferable to other sources.[8]

Our analysis is based on panel data comprising 3,015 source-host country pairs from 2000 to 2007. There are 53 source countries and 60 host countries. Of these, among the sources, 12 are developing Asia, while among the hosts there are 13 developing Asian countries. In total, we have 144 source-host country pairs between developing Asian countries. Table A1 shows the countries that are included in the sample. Our dataset shows an annual average of 643 cross-border M&A deals or 14 percent of total global cross-border M&A deals in developing Asia which on average are worth about US$ 350 million.[9] Of the 643 deals, 295 (worth on average close to US$ 354 million) originate from developed countries, 290 deals (worth on average US$ 361 million) are from developing Asia themselves, and the rest are from other developing economies in our country samples (63 deals worth on average is US$ 247 million).

Figure 4 shows the country breakdown of foreign acquirers of assets in developing Asia. Interestingly, almost 50 percent is from other developing Asian countries (i.e. intra-Asia), followed by the US and the EU. Concentrating on just intra-regional deals which appear rather large, we see that on average over our sample period, China has the highest M&A purchases of above US$600 million (Figure 5) while Hong Kong has the highest M&A sales of around US$600 million (Figure 6). In the case of FDI data, a signficant degree of round-tripping is observed (Rajan and Hattari, 2008a). In the case of M&As, it becomes clear that something similar is going on in the sense that a number of Mainland Chinese

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5 UNCTAD (2008) offers a discussion of the role of SWFs as a source of finance for FDI activity.

6 https://zephyr.bvdep.com/Zephyr/ .

7 According to Zephyr, "(w)hen the bidder is an investment trust or pension fund, then the threshold is raised to 5 per cent." Unfortunately the various private sector companies that collect M&A data do not appear to use standardized methodologies or definitions making it tricky to compare across databases.

8 At times, and in order to get a complete picture of on-goings, we combine the UNCTAD data with the Zephyr data.

9 These figures may not be completely consistent with Figures 2 and 3 which are aggregate data from UNCTAD.

companies have acquired Hong Kong companies (Figures 7 and 8). Interestingly, however, we do not observe the reverse (i.e. Hong Kong purchases of Chinese enterprises). We can see this from Table 4 which highlights the top 50 bilateral M&A transactions in developing Asia. While China's purchases of asssets in Hong Kong constitute 17 percent of total M&A deals in Asia in 2007, Hong Kong's purchases of Mainland Chinese assets were relatively modest.[10] This may suggest that while most of the FDI from Mainland China into Hong Kong has involved purchases of existing entities in Hong Kong, the flows from Hong Kong to China have primarily involved Greenfield investments. This helps to further clarify the types of round-tripping taking place between the two economies and also explains the seemingly large share of intra-developing Asian M&A transactions.[11]

Referring again to Figures 5 and 6, apart from China and Hong Kong, the other leading investors from the region are Singapore, Indonesia, Malaysia, India, Korea and Taiwan. As for M&A sales, most developing Asian companies merged or acquired companies based either in Hong Kong or Singapore within our sample period. This may be because both economies have been regional bases for many corporations. Apart from these, companies in China, Taiwan, Malaysia, India and Korea were important targets for intra-regional investments.

3. Empirics

Having analyzed broad trends and patterns in cross-border M&As in developing Asia, we aim to understand the main financial determinants of such flows. We start at a general level but focus specifically on the purchases in developing economies, especially developing Asia.

The theory on M&A is limited primarily to domestic activities (for instance, see review in Gugler *et al*., 2008). Head and Ries (2008) offer a theoretical basis for a gravity model of cross-border M&As. Accordingly, we estimate an augmented gravity model to understand the main drivers of cross-border M&As in developing Asia. Since a large share of our dependent variable is zero observations, our econometric analysis follows di Giovanni (2005) and Hattari and Rajan (2008a,b) by computing a Tobit model using the two-step procedure. First, a probit model is estimated for whether a deal is observed or not conditional on the same right-hand variables as in equation (1), and the inverse Mills ratio (IMR) is constructed from the predicted values of the model. Second, a regression is run to estimate equation (1) including the inverse Mills ratio as a regressor.

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[10] For comparison, in the case of overall FDI data, Hong Kong's FDI to China constituted almost 50 percent of total FDI inflows into developing Asia between 1997 and 2005, while China's FDI inflows into Hong Kong constituted about 17 percent of total inflows into developing Asia.

[11] For useful overviews of the linkages between Hong Kong and Mainland China and the importance of the former as a financial source for many Mainland enterprises, see Cheung and Yeung (2007), Leung and Unteroberdoerster (2008) and Shi and Tsang (2006).

3.1 Data

As indicated in Section 2, our bilateral M&A deals data are based on the Zephyr database in millions of US dollars. We deflated the data using the 1996 US CPI for urban consumers. Real GDP and real GDP per capita in constant 2000 US dollars are taken from the World Bank's *World Development Indicators* database. Data on distance is taken from the CEPII.[12] Data on the ratio of stock market turnover, exchange rate, CPI of the host and source countries, and the ratio of money supply to GDP are all taken from the World Bank's *World Development Indicators* database. Monthly data on the stock market index are taken from the World Bank's *Global Economic Monitoring* database. For financial openess we used the index developed by Chinn and Ito (2002). The index is based on the four binary dummy variables, viz. does the country have multiple exchange rates, current account restrictions, capital account restrictions, and requirements of the surrender of export proceeds (as reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).

3.2 Model

The baseline specification of our estimated model is outlined below:[13]

$$\ln(MA_{ijt}) = \beta_0 + \beta_1 \ln(GDP_{it}) + \beta_2 \ln(GDP_{jit}) + \beta_3 \ln(DIST_{ij}) + \beta_4 X_{ijt} + \eta_i + \lambda_t + \nu_{ijt} \qquad (1)$$

where: MA_{ijt} is the real MA flow from source country (i) to host country (j) at time (t); GDP_{it} and GDP_{jt} are real GDPs in US dollar for the source country (i) and the host country (j) at time (t); $DIST_{ij}$ is the the unobservable time effects (we use year dummies); and ν_{ijt} is a nuisance term.[14]

We expect the coefficients of the real GDP of the source and destination countries to both be positive as they proxy for masses which are important in gravity models. A destination country that has a large market tends to attract more capital flows, in our case M&A deals. The sign of the source country size is ambiguous. While large real GDP indicates greater aggregate income and therefore higher ability to invest abroad, small real GDP implies limited market size and consequent desire by companies to expand their wings overseas to gain market share. The sign for distance from the source to the host country should be negative, as greater distance between countries makes a foreign operation more difficult and expensive to supervise and might therefore discourage M&A deals.

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12 For more information, see CEPII's website at http://www.cepii.fr/.

13 We draw on Hattari and Rajan (2008a,b) and de Giovanni (2006) as our starting point.

14 According to CEPII's website, geographical distance is calculated following the great circle formula which uses latitudes and longitudes of the most important cities/agglomerations (in terms of population).

We augment the basic gravity model with financial variables. We hypothesize that easier credit availability (proxied by greater M2-to-GDP) in the source country will translate into more M&A deals. We also included four measures of financial risks, all of which should reduce M&As purchases in that country. We included the volatility of stock market of the host country as a proxy for domestic market risk by calculating the rolling standard deviation of the host countries' stock market daily data within a year. We also calculated the rarte of depreciation/appreciation of the bilateral real exchange rates by taking the change in the natural log difference of period *t* and period *t*+1 as a measure of exchange rate-related market risk (measured per unit for host currency). We proxy the (il)liquidity risks by looking at the stock market turnover ratio which is defined as the total value of shares traded during the period divided by the average market capitalization for the period. We used a financial openess index in the host country to test whether financial openess in general can lead to more M&A deals between emerging Asia economies when controlling for other factors.

3.3 Empirical Results

Equation (1) is our baseline model. We then interact each of our control variables with Developing Asia as source countries and with intra-developing Asia M&A deals so as to establish whether the results change when we move from a global to regional perspective.

3.3.1 Global Baseline

In our global specification of Table 5 (i.e. including all countries in our database) the distance variable is statistically and economically significant. Greater distance between the host and source country tends to lower bilateral M&As. Despite all the hype about the "death of distance" and the "world being flat" (see Ghemawat, 2007 for a critique), cross-border economic transactions remain hampered by physical distance which may be proxying transaction costs and/or information gaps.[15] As expected, larger countries experience greater purchases and sales of M&As. The level of liquidity in the source country positively impacts the level of M&As in the host country. A 1 percent increase in the M2-to-GDP ratio in the source country is associated with a 2 percent increase in M&As to the host country and this result is statistically signficant, signalling that the source/availability of funds is important. Greater real exchange rate variability appears to deter bilateral FDI flows. With regard to the financial risk variables, market risks in the host country proxied by stock market volatility appear to deter M&As to that country (statistically signficant at the 10 percent level), while the result on the liquidity risk's impact is statistically significant but economically not very signficant. A host country that is more financially open seems to attract more

[15] The persistence of the distance puzzle is fairly robust across different types of cross-border activities. See Loungani *et al*. (2002) in the case of trade and FDI, Coe *et al*. (2007) and references cited in the case of trade, and Portes and Rey (2005) in the case of portfolio flows. Hattari and Rajan (2008a,b) find the distance elasticity to be statistically and economically significant in the case of intra developing Asian FDI flows. Hattari and Rajan (2008b) suggest is may be proxying for time zone differences or information gaps.

M&A deals flows, this result being highly sign ficant both economically and statistically. Overall, financial variables – liquidity as well as risk -- clearly impact cross-border M&A transactions.

Robustness checks: To be sure of our baseline regression we undertook some robustness checks. First, given the importance of China-Hong Kong transactions we excluded the China-Hong Kong observations. As can be seen from Table 6.1, results remained unaltered. In other words the results are not driven or impacted by China-Hong Kong M&A transactions. Second, given the possibility that the error terms are likely autocorrelated, we also re-estimated the regression to report the HAC standard errors. Once again the results remain highly robust.[16]

3.3.2 Interaction with Developing Asia and Intra-Asia

Do financial variables impact M&As to developing Asia and particularly intra-(developing) Asian M&A flows differently from M&A flows globally in general? In this section we examine whether the foregoing results change when the host country is a developing Asian country as well as when the source and host countries are both developing Asian countries.

Table 6a includes dummy interactions for the various control variables with developing Asia as a host. As can be seen, the basic gravity and the augmented models remain broadly consistent with the results in Table 5. There are three things worth highlighting once we interact our augmented model with developing Asia as a host. First, the liquidity risk elasticity which was marginally positive now turns marginally negative but is not economically significant. Second, there is some evidence that real exchange rate volatility hurts M&As to developing Asia relatively less than it hurts global M&A flows (elasticity decreasing by 0.5), though this result is not statistically significant. Third, and most noteworthy, the financial openness appears to be especially important for foreign M&As of firms in developing Asia, this result being highly statistically and economically significant.

Table 6b examines the specific determinants of intra-(developing) Asian M&As. Once again the basic augmented gravity model remains intact. There are four things worth highlighting once we interact our augmented model with the intra-(developing) Asian dummy. First, there is some evidence that real exchange rate volatility hurts intra-Asian M&As relatively less than it does global M&A flows (elasticity in absolute terms decreasing by almost 1), though this result is not statistically significant. Second, availability of credit in the source country appears to be relatively more important to intra-Asian M&As, with the elasticity rising by 0.6 and the result being somewhat significant statistically (at the 10 percent level). Third, intra-(developing) Asian M&As appear to be especially sensitive to market risks, with the elasticity in absolute terms rising by almost 1. Fourth, the financial openness also looks to be especially

[16] We also ran the regression using within host country effects, and the results were still robust. Using within country effects eliminates the transaction cost variable that we have in our specifications, i.e. distance. These results are available from the authors on request. These checks were suggested by the referee. We thank the referee for these suggestions.

important for intra-Asian M&As, this result being highly statistically and economically significant. The last two findings are especially striking. All in all, there is evidence that financial variables (liquidity and risk) appear to impact global M&A transactions in general but especially intra-Asian ones.

4. Conclusion

Developing economies have experienced a surge in cross-border M&As over the last two fifteen years. In many cases M&As have been the predominant form of FDI. Despite this, the academic literature on the subject has been fairly thin, owing possibly to the lack of data. This paper has attempted to fill this void by analyzing trends, patterns and determinants of M&As in developing economies. Particular focus has been on developing Asia (i.e. most of East, Southeast and South Asia excluding Japan) which has experienced especially robust growth in cross-border M&As.

Between 1990 and 2006 cross-border M&A sales and purchases involving devloping Asia grew signficantly. There was a marked jump in purchases within Asia post-1997-98 crisis, with Korea, Thailand, Indonesia and Hong Kong being the greatest beneficiaries. Singapore, Hong Kong and China have been the top developing economy sources of M&A in recent years. Interestingly, almost 50 percent of M&A purchases appear to be from other developing Asian economies. This seems like a fairly large number, but is primarily due to purchases of Hong Kong assests by enterprises in Mainland China which then reinvest mainly in Greenfield activities in the Mainland (i.e. round-tripping). Apart from China and Hong Kong, Singapore has been both a source and target of intra-regional M&A.

In order to better understand the main drivers of M&A, we estimated an augmented model using panel data comprising almost 3000 source-host country pairs from 2000 to 2007 involving both developed and developing economies. The aim was to develop a relatively parsimonious model which includes commonly-used determinants as well as a focus on specific financial risk variables. To this end we followed the basic gravity type framework which argues that market size and distance are important determinants in the choice of location of direct investment's source countries. The model fits the data quite well. In addition to the usual gravity variables, we find that certain financial liquidity and risk variables along with the financial openness in the host countries appear to be important in determining the M&A flows, particularly with regard to intra-(developing) Asian M&A flows. In this regard, the ongoing global financial crisis is likely to sharply curtail the extent of cross-border M&A transactions, at least temporarily. Beyond attempts by governments to ease domestic liquidity sharply, at a time of depressed macroeconomic conditions, they would be well-advised to focus on reviewing possible microeconomic and regulatory factors that might hinder cross-border M&A transactions.

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Table 1. Stock of FDI Outflows, 1970-2007 (Millions of US Dollars)

Region/economy	1970	1975	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
World	14 151	28 594	51 550	61 975	239 111	361 562	1 231 639	751 297	537 424	562 760	920 151	880 808	1 323 150	1 996 514
Developed economies	14 100	28 057	48 397	58 063	227 183	305 930	1 093 665	665 694	483 157	507 040	786 004	748 885	1 087 186	1 692 141
Europe	5 095	10 618	22 155	32 206	139 323	174 124	867 700	454 868	279 927	307 089	402 172	689 788	736 861	1 216 491
European Union	5 063	10 447	21 902	26 406	130 553	159 032	813 128	435 395	265 636	285 205	368 006	609 267	640 542	1 142 229
Other developed Europe	32	172	253	5 801	8 770	15 091	54 572	19 473	14 290	21 884	34 167	80 521	96 320	74 262
North America	8 521	15 496	23 328	17 250	36 219	103 536	187 305	160 902	161 719	152 276	338 252	44 988	260 781	367 605
United States	7 590	14 244	19 230	13 388	30 982	92 074	142 626	124 873	134 946	129 352	294 905	15 369	221 664	313 787
Other developed countries	484	1 944	2 913	8 607	51 641	28 271	38 660	49 924	41 512	47 675	45 580	14 109	89 544	108 045
Japan	355	1 763	2 385	6 452	48 024	22 630	31 558	38 333	32 281	28 800	30 951	45 781	50 266	73 549
Developing economies	51	536	3 153	3 912	11 909	55 007	134 784	82 869	49 640	45 039	120 008	117 579	212 258	253 145
Africa	19	173	1 090	345	650	2 938	1 518	- 3 031	270	1 245	2 050	2 282	7 829	6 055
North Africa	2	35	87	7	135	133	226	- 50	26	115	166	329	134	1 159
Other Africa	17	138	1 003	338	515	2 806	1 292	- 2 981	244	1 130	1 884	1 954	7 695	4 896
Latin America and the Caribbean	31	222	899	642	300	7 459	49 579	36 456	12 116	21 304	28 027	35 765	63 281	52 336
South and Central America	30	195	778	558	2 018	3 809	7 307	5 176	7 114	9 563	19 194	20 046	44 934	26 930
Caribbean	1	27	121	84	- 1 718	3 650	42 272	31 280	5 003	11 741	8 833	15 720	18 347	25 405
Asia and Oceania	1	141	1 164	2 925	10 959	44 610	83 687	49 444	37 253	22 490	89 931	79 531	141 147	194 754
Asia	1	141	1 146	2 924	10 948	44 615	83 680	49 438	37 233	22 457	89 875	79 412	141 105	194 663
West Asia	0	99	591	96	- 964	- 701	2 935	1 202	3 218	- 1 867	7 659	12 271	23 203	44 167
South, East and South-East Asia	1	42	555	2 827	11 912	45 315	80 744	48 235	34 015	24 323	82 216	67 141	117 902	150 496
East Asia	1	4	150	2 260	9 574	33 558	71 973	26 145	27 555	17 447	62 924	49 836	82 301	102 865
China	0	0	0	629	830	2 000	916	6 885	2 518	2 855	5 498	12 261	21 160	22 469
Hong Kong, China	-	-	82	961	2 448	25 000	59 352	11 345	17 463	5 492	45 716	27 201	44 979	53 187
South Asia	0	0	11	28	10	130	546	1 429	1 778	1 590	2 314	3 515	13 369	14 165
India	-	-	4	3	6	119	509	1 397	1 679	1 879	2 179	2 978	12 842	13 649
South-East Asia	0	38	394	539	2 328	11 627	8 225	20 662	4 681	5 286	16 978	13 790	22 232	33 466
Oceania	0	0	18	1	11	- 5	8	6	21	33	55	119	42	92
South-East Europe and the CIS (Transition economies)	0	0	0	0	20	624	3 191	2 734	4 627	10 681	14 138	14 345	23 706	51 227
Southeast Europe	-	-	-	-	20	7	5	185	548	124	366	308	381	1 370
CIS	0	0	0	0	0	617	3 186	2 549	4 080	10 558	13 772	14 037	23 325	49 858

Source: UNCTAD.

Table 2. Global M&A Sales and Purchases, 1987-2006 (Percent Share)

Region	1987-90	1990-94	1995-98	1999-2002	2003-06
Sales					
World	100.0	100.0	100.0	100.0	100.0
Developed economies	95.2	87.7	84.8	90.1	83.4
European Union	31.9	48.4	37.9	48.6	51.3
United States	49.7	29.4	33.0	29.0	18.9
Japan	0.4	0.3	0.7	1.8	1.1
Developing economies	4.8	11.6	14.2	9.4	13.8
Africa	0.4	0.7	0.8	0.9	1.7
Latin America and the Caribbean	2.8	6.1	9.2	4.9	4.2
Asia	1.7	4.8	4.1	3.6	7.8
West Asia	0.0	0.1	0.1	0.1	1.5
South, East and South-East Asia	1.6	4.7	4.0	3.5	6.3
South-East Europe and the CIS (Transition economies)	0.0	0.7	1.0	0.4	2.9
Purchases					
World	100.0	100.0	100.0	100.0	100.0
Developed economies	96.5	90.7	92.4	95.3	87.0
European Union	47.9	51.0	48.6	64.9	48.3
United States	24.8	22.0	26.9	15.8	22.5
Japan	7.9	5.0	1.1	2.0	1.5
Developing economies	3.3	9.2	7.5	4.4	12.0
Africa	0.1	1.8	0.7	0.6	1.3
Latin America and the Caribbean	0.5	2.1	2.5	1.2	3.1
Asia	2.7	5.2	4.3	2.6	7.6
West Asia	0.6	0.7	0.4	0.2	2.4
South, East and South-East Asia	2.1	4.6	3.8	2.4	5.2
South-East Europe and the CIS (Transition economies)	0.0	0.1	0.1	0.1	1.0

Source: UNCTAD.

Table 3. M&A Deals of Selected Asian Countries (Billions of US Dollars)

Country	1990-1997	1998-2006	2000	2001	2002	2003	2004	2005	2006
Sales									
World	154.9	631.1	1,143.8	594.0	369.8	297.0	380.6	716.3	880.5
East Asia	*4.1*	*16.9*	*14.1*	*18.8*	*10.0*	*14.1*	*16.7*	*25.8*	*28.3*
China	0.7	3.9	2.2	2.3	2.1	3.8	6.8	8.3	6.7
Hong Kong, China	3.0	6.1	4.8	10.4	1.9	6.1	3.9	9.5	12.8
Korea, Republic of	0.3	5.4	6.4	3.6	5.4	3.8	5.6	6.5	2.8
Taiwan Province of China	0.1	1.4	0.6	2.5	0.5	0.4	0.4	0.8	5.7
South Asia	*0.5*	*2.9*	*1.2*	*1.1*	*1.9*	*1.5*	*2.2*	*4.6*	*10.1*
India	0.3	2.1	1.2	1.0	1.7	0.9	1.8	4.2	6.7
South-East Asia	*2.4*	*8.9*	*5.7*	*13.1*	*4.9*	*4.6*	*5.2*	*14.8*	*15.4*
Indonesia	0.3	2.2	0.8	3.5	2.8	2.0	1.3	6.8	0.6
Malaysia	0.3	1.1	0.4	1.4	0.5	0.1	0.6	1.5	2.8
Philippines	0.9	0.9	0.4	2.1	0.5	0.2	0.7	0.3	0.2
Singapore	0.6	2.9	1.5	4.9	0.6	1.8	1.2	5.8	7.3
Thailand	0.2	1.7	2.6	1.0	0.2	0.1	1.2	0.3	4.3
Purchases									
World	154.9	631.1	1143.8	594.0	369.8	297.0	380.6	716.3	880.5
East Asia	*4.4*	*9.0*	*9.1*	*3.8*	*6.3*	*6.7*	*5.2*	*16.8*	*24.2*
China	0.4	2.9	0.5	0.5	1.0	1.6	1.1	5.3	14.9
Hong Kong, China	3.0	4.9	5.8	3.0	5.1	4.2	3.0	10.5	7.8
Korea, Republic of	0.8	0.6	1.7	0.2	0.1	0.7	0.4	0.5	0.9
Taiwan Province of China	0.3	0.5	1.1	0.2	0.1	0.3	0.7	0.6	0.5
South Asia	*0.2*	*1.5*	*0.9*	*2.2*	*0.3*	*1.4*	*0.9*	*2.6*	*4.7*
India	0.2	1.5	0.9	2.2	0.3	1.4	0.9	2.6	4.7
South-East Asia	*3.2*	*11.0*	*11.1*	*18.8*	*4.2*	*8.9*	*13.2*	*15.9*	*18.1*
Indonesia	0.2	1.0	1.4	0.0	0.2	0.0	0.5	5.9	0.3
Malaysia	1.7	1.6	0.8	1.4	0.9	3.7	0.8	1.7	3.0
Philippines	0.1	0.3	0.1	0.3	0.0	0.0	0.1	2.0	0.2
Singapore	1.1	7.8	8.8	16.5	2.9	5.0	11.6	6.1	14.2
Thailand	0.1	0.2	0.0	0.7	0.1	0.2	0.2	0.2	0.2

Source: UNCTAD.

Table 4. Top 50 Bilateral M&A Deals between Asian Countries

Source	Host	Value of M&A deals (Millions of US$)	In percent of deals to Developing Asia (%)
China	Hong Kong	5,698.6	17.0
Hong Kong	Singapore	853.5	2.6
China	Taiwan	849.2	2.5
China	Singapore	844.7	2.5
Indonesia	Singapore	530.1	1.6
Hong Kong	China	526.4	1.6
Malaysia	Singapore	443.2	1.3
Singapore	China	420.7	1.3
Taiwan	Singapore	222.1	0.7
Indonesia	Malaysia	210.2	0.6
India	Singapore	208.2	0.6
India	Malaysia	187.1	0.6
Korea	China	184.6	0.6
Singapore	India	172.9	0.5
Singapore	Taiwan	150.9	0.5
China	Malaysia	142.0	0.4
Singapore	Malaysia	99.8	0.3
Korea	Singapore	97.6	0.3
Thailand	Singapore	97.5	0.3
Pakistan	Singapore	94.8	0.3
Taiwan	Hong Kong	91.9	0.3
Indonesia	Hong Kong	91.2	0.3
China	Korea	91.1	0.3
India	Hong Kong	85.2	0.3
Malaysia	Hong Kong	73.1	0.2
Singapore	Hong Kong	61.6	0.2
Korea	Hong Kong	52.2	0.2
Indonesia	Korea	36.5	0.1
Vietnam	Hong Kong	34.6	0.1
Thailand	Hong Kong	30.4	0.1
Malaysia	Korea	25.6	0.1
Hong Kong	Malaysia	23.9	0.1
Malaysia	Indonesia	23.7	0.1
Philippines	Singapore	23.4	0.1
Korea	Taiwan	23.4	0.1
Indonesia	India	22.7	0.1
Singapore	Indonesia	21.4	0.1
Singapore	Philippines	21.0	0.1
Thailand	India	19.6	0.1
Vietnam	Singapore	16.3	0.0
Thailand	Philippines	14.5	0.0
Hong Kong	Taiwan	14.4	0.0
Malaysia	India	13.8	0.0
India	Korea	13.6	0.0
China	Thailand	13.0	0.0
Korea	India	11.4	0.0
Thailand	Malaysia	10.0	0.0
Singapore	Thailand	9.9	0.0
Taiwan	China	9.6	0.0
Thailand	Korea	7.2	0.0

Source: UNCTAD and Zephyr.

Table 5. Gravity Equation 1/ 2/ 3/

Dependent variable: Ln of bilateral real M&A deals		
Regression type	Two-stage Tobit	Two-stage Tobit
Source countries	All	Exclude Hong Kong and China
ln(real GDP i)	4.814***	5.112***
	(0.953)	(0.954)
ln(real GDP j)	1.164***	1.164***
	(0.088)	(0.088)
ln distance	-1.571***	-1.542***
	(0.129)	(0.128)
Change in ln RXR of i wrt j	-1.155**	-1.248**
	(0.460)	(0.460)
ln M2 to GDP in i	2.092***	2.057***
	(0.542)	(0.542)
ln stock market volatility in j	-0.325***	-0.326***
	(0.070)	(0.070)
Stock market turnover in j	0.003***	0.003***
	(0.001)	(0.001)
Financial openness index in j	0.640***	0.642***
	(0.063)	(0.064)
Observations	2883	2867
Adjusted R-squared	0.26	0.26

Notes: 1/ Robust standard error in parentheses.
2/ * significant at 10%; ** significant at 5%; *** significant at 1%.
3/ Year dummies, source countries dummies, inverse Mills' ratio, and constant are not shown.

Source: Authors' calculations.

Table 6a. Gravity Equation 1/ 2/ 3/

Dependent variable: Ln of bilateral real M&A deals	Regression
Regression type	Two-stage Tobit
Source countries	All
ln(real GDP i)	4.854***
	(0.945)
ln(real GDP j)	1.159***
	(0.089)
ln distance	-1.554***
	(0.127)
Change in ln RXR of i wrt j	-1.355***
	(0.472)
ln M2 to GDP in i	2.093***
	(0.541)
ln stock market volatility in j	-0.294***
	(0.068)
Stock market turnover in j	0.007***
	(0.001)
Financial openness index in j	0.412***
	(0.080)
Developing Asia as host	0.434
	(1.202)
Developing Asia as host * The change in ln RXR of i wrt j	0.553
	(1.818)
Developing Asia as host * ln M2 to GDP in i	-0.028
	(0.278)
Developing Asia as host * ln stock market volatility in j	0.075
	(0.125)
Developing Asia as host * Stock market turnover in j	-0.010***
	(0.002)
Developing Asia as host * Financial openness index in j	0.415***
	(0.103)
Observations	2883
Adjusted R-squared	0.26

Notes: 1/ Robust standard error in parentheses.
2/ * significant at 10%; ** significant at 5%; *** significant at 1%.
3/ Year dummies, source countries dummies, inverse Mills' ratio, and constant are not shown.

Source: Authors calculations.

Table 6b. Gravity Equation 1/ 2/ 3/

Dependent variable: Ln of bilateral real M&A deals	Regression
Regression type	Two-stage Tobit
Source countries	Developing Asia
ln(real GDP i)	5.417***
	(0.940)
ln(real GDP j)	1.235***
	(0.090)
ln distance	-1.551***
	(0.121)
Change in ln RXR of i wrt j	-1.451***
	(0.464)
ln M2 to GDP in i	2.010***
	(0.541)
ln stock market volatility in i	-0.282***
	(0.068)
Stock market turnover in j	0.004***
	(0.001)
Financial openness index in j	0.602***
	(0.068)
Intra-developing Asia M&A deals	-0.501
	(1.751)
Intra-developing Asia M&A deals * The change in ln RXR of i wrt j	0.983
	(2.709)
Intra-developing Asia M&A deals * ln M2 to GDP in i	0.626*
	(0.346)
Intra-developing Asia M&A deals * ln stock market volatility in i	-0.918***
	(0.262)
Intra-developing Asia M&A deals * Stock market turnover in j	-0.003
	(0.002)
Intra-developing Asia M&A deals * Financial openness index in j	0.534***
	(0.124)
Observations	2883
Adjusted R-squared	0.26

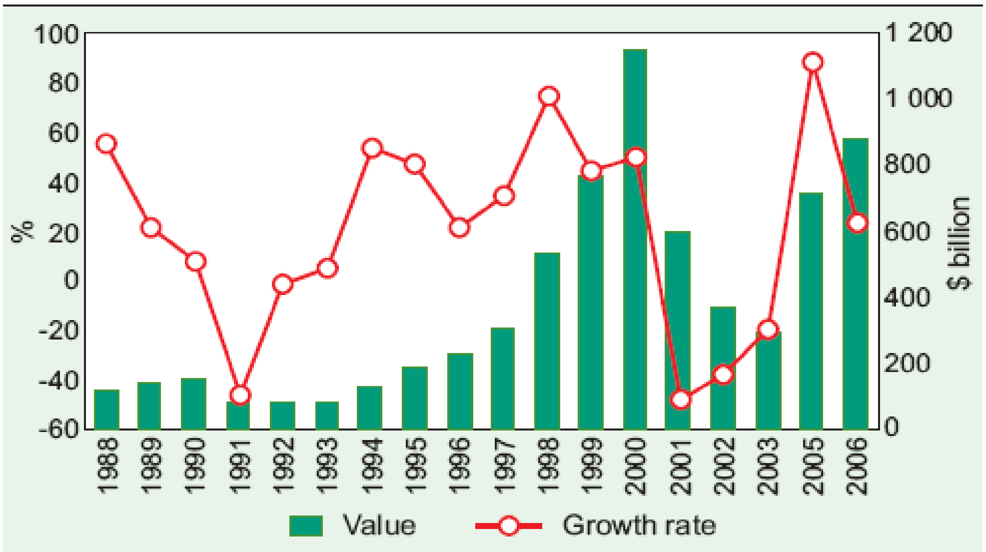
Notes: 1/ Robust standard error in parentheses.
2/ * significant at 10%; ** significant at 5%; *** significant at 1%.
3/ Year dummies, source countries dummies, inverse Mills' ratio, and constant are not shown.

Source: Authors' calculations.

Table A1. Source and Host Countries

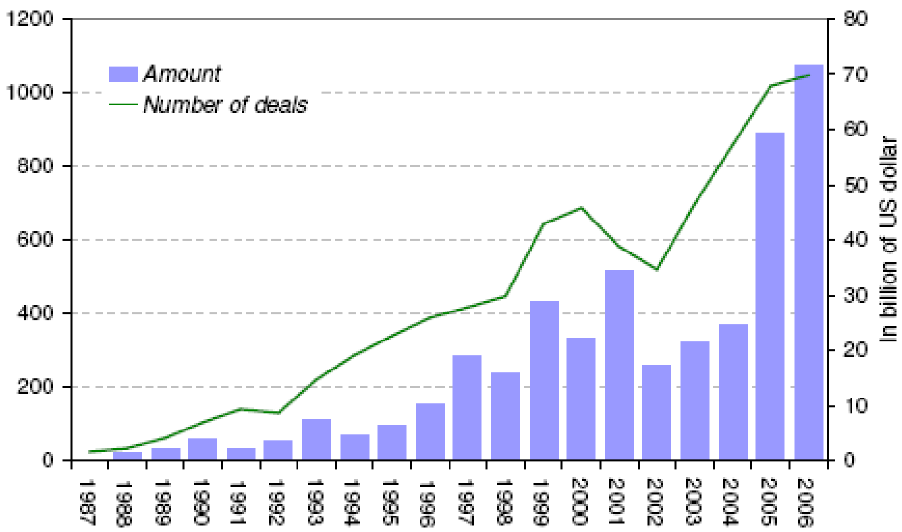
Source Countries			
ARGENTINA	FRANCE	NEW ZEALAND	TAIWAN
AUSTRALIA	GERMANY	NORWAY	THAILAND
AUSTRIA	GREECE	PAKISTAN	TURKEY
BELGIUM	HONG KONG	PERU	UKRAINE
BRAZIL	HUNGARY	PHILIPPINES	UNITED KINGDOM
BULGARIA	INDIA	POLAND	UNITED STATES
CANADA	INDONESIA	PORTUGAL	VENEZUELA
CHILE	IRELAND	ROMANIA	VIETNAM
CHINA	ISRAEL	RUSSIA	
COLOMBIA	ITALY	SINGAPORE	
CZECH REPUBLIC	JAPAN	SLOVAKIA	
DENMARK	KOREA	SOUTH AFRICA	
ECUADOR	MALAYSIA	SPAIN	
EGYPT	MEXICO	SWEDEN	
FINLAND	NETHERLANDS	SWITZERLAND	
Host Countries			
Algeria	Egypt	Korea	Singapore
Argentina	Finland	Malaysia	Slovakia
Australia	France	Mexico	South Africa
Austria	Germany	Netherlands	Spain
Azerbaijan	Greece	New Zealand	Sri Lanka
Belgium	Hong Kong	Nigeria	Sweden
Brazil	Hungary	Norway	Switzerland
Bulgaria	India	Pakistan	Taiwan
Canada	Indonesia	Peru	Thailand
Chile	Iran	Philippines	Turkey
China	Ireland	Poland	Ukraine
Colombia	Israel	Portugal	United Kingdom
Czech Republic	Italy	Romania	United States
Denmark	Japan	Russia	Venezuela
Ecuador	Kazakhstan	Saudi Arabia	Vietnam

Figure 1. Global Cross-border M&A Deals, Value and Growth, 1988-2006



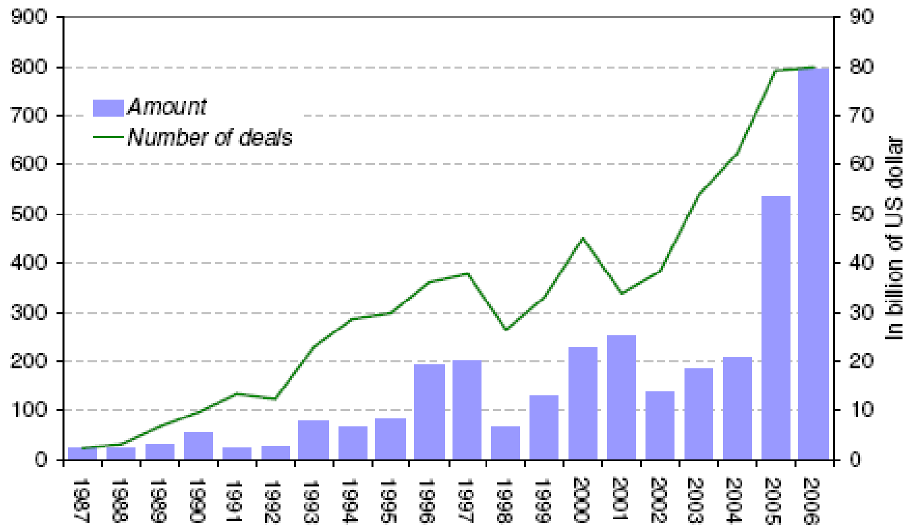
Source: UNCTAD (2007).

Figure 2. M&A Sales in Developing Asia, 1987-2006



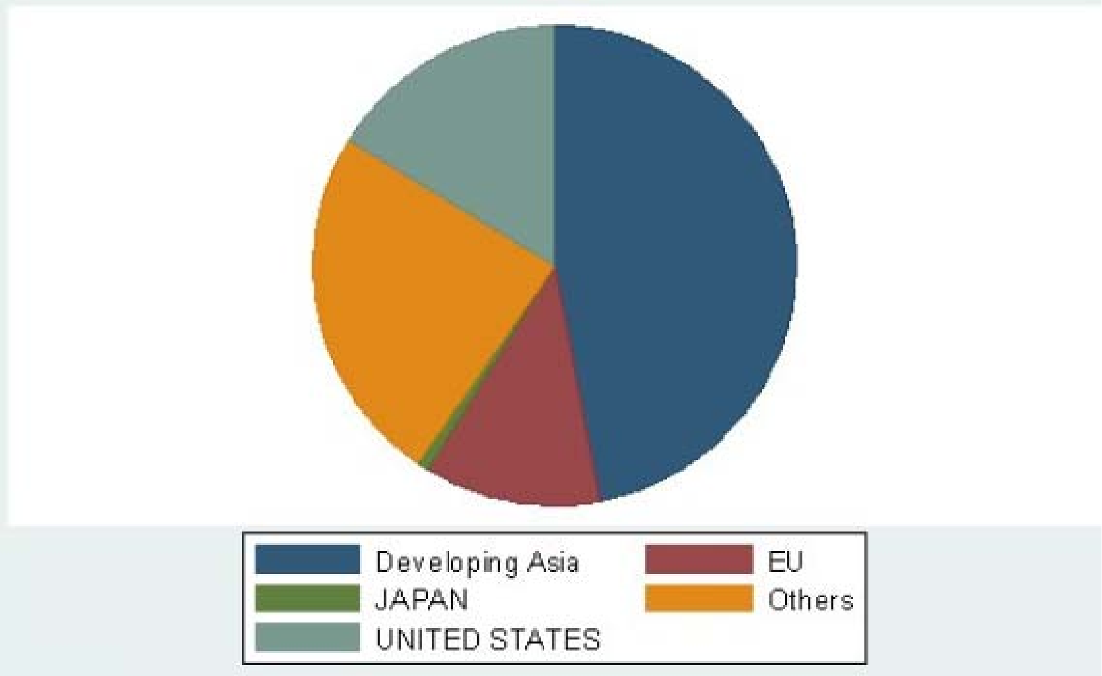
Source: Zephyr.

Figure 3. M&A Purchases in Developing Asia, 1987-2006



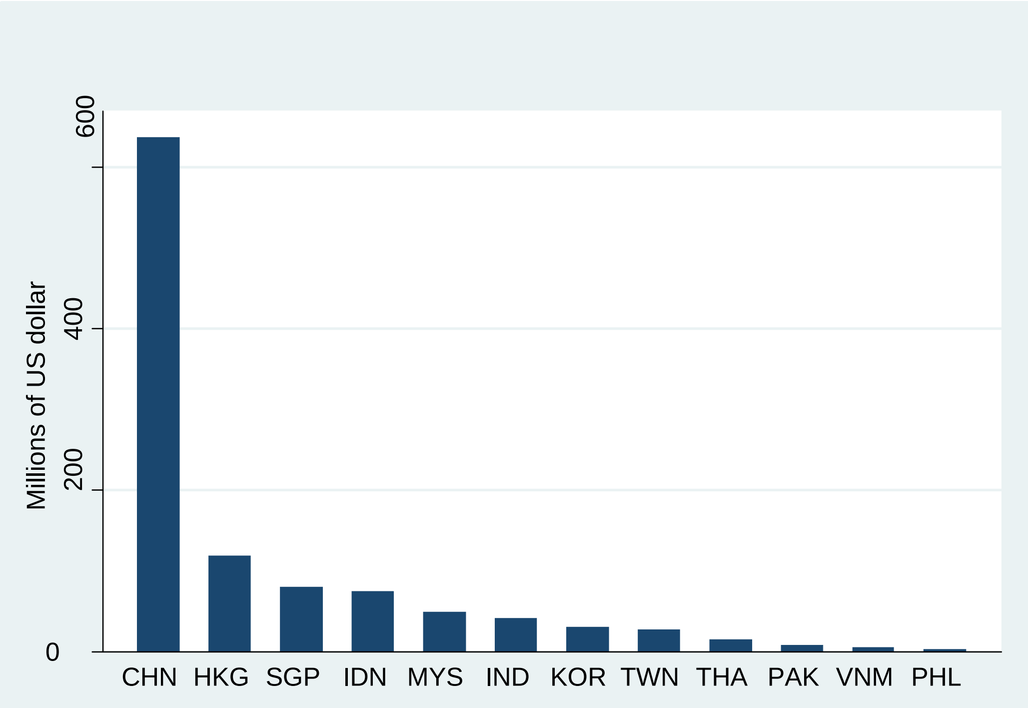
Source: Zephyr.

Figure 4. Sources of M&A Deals in Developing Asia, 2000-2007



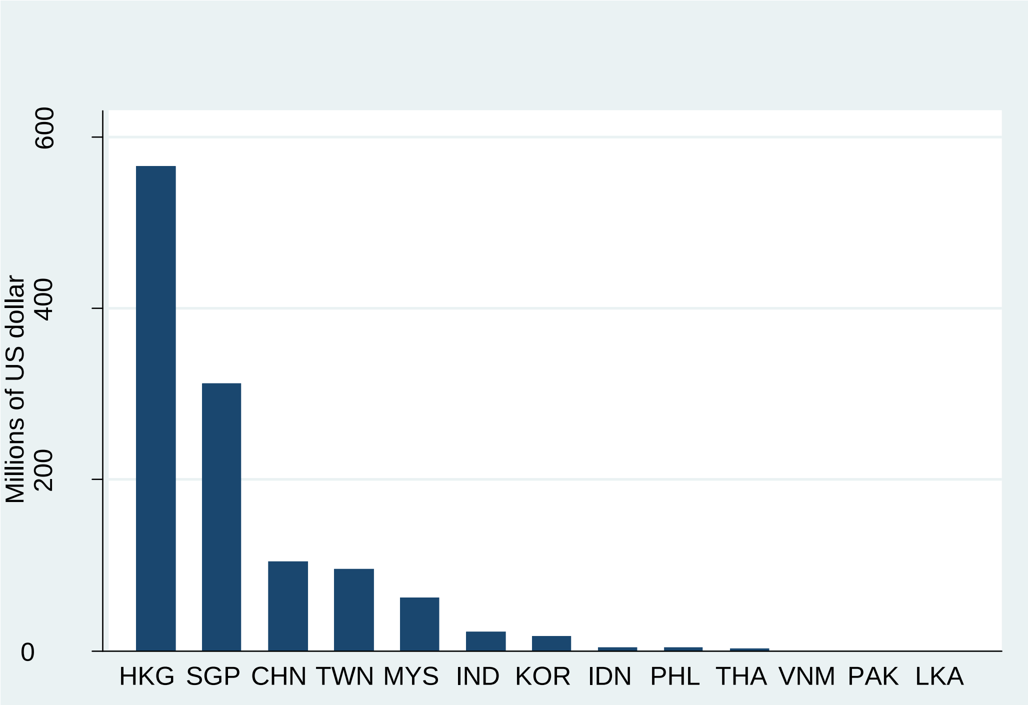
Source: Zephyr.

Figure 5. Intra-Asian M&A Purchases 2000-07



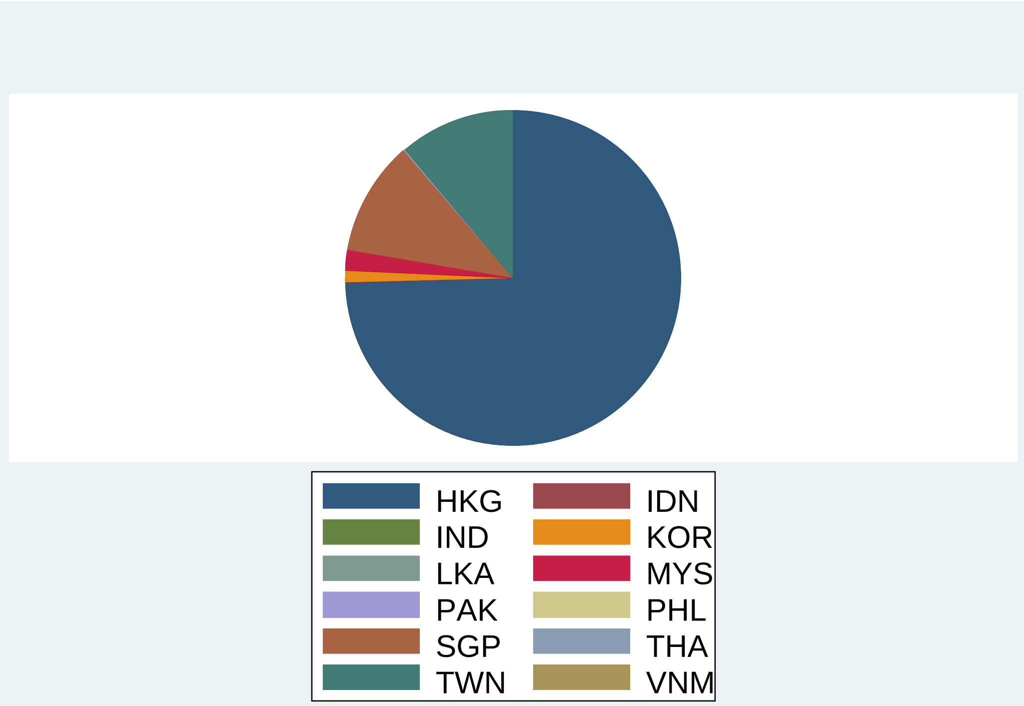
Source: Zephyr.

Figure 6. Intra-Asian M&A Sales 2000-07



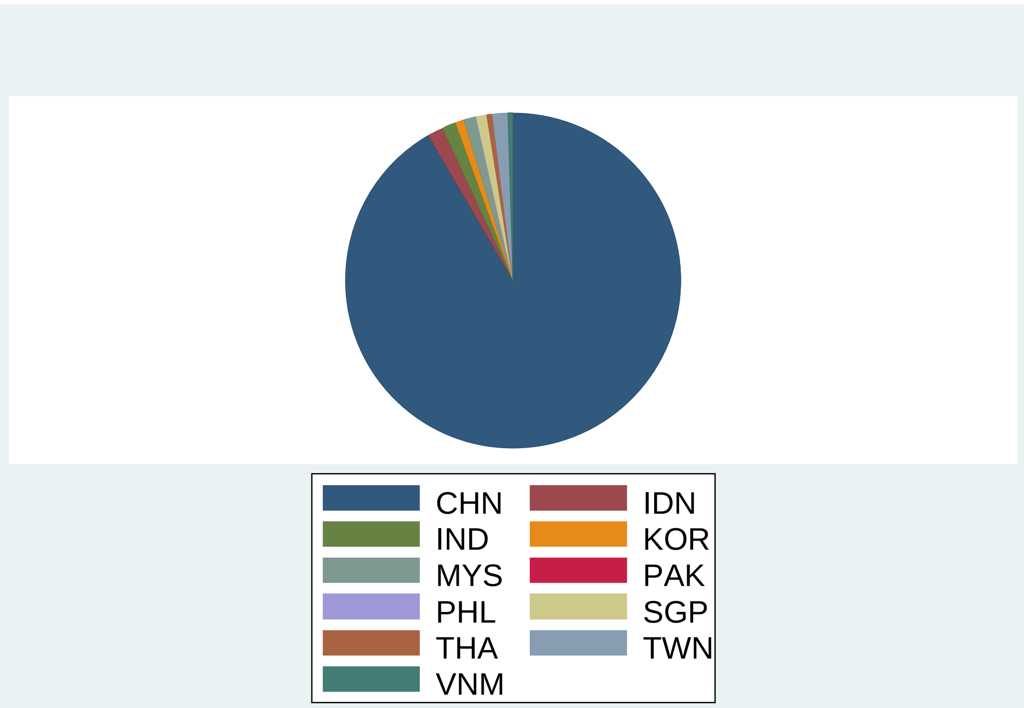
Source: Zephyr.

Figure 7. China's M&A Purchases in Developing Asia 2000-07



Source: Zephyr.

Figure 8. Hong Kong's M&A Sales by Developing Asia 2000-07



Source: Zephyr.