

Transactions: A New Look at Services Sector Foreign Direct Investment in Asia

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Abstract

This paper presents new micro-level data consisting of individual greenfield investment projects and mergers and acquisitions as a source for detailed analysis of services sector cross-border investment flows among the Asian Development Bank (ADB) regional membership in Asia. The new transactional foreign direct investment (FDI) data are methodologically distinct from traditional BPM5-compliant FDI data but found to yield generally comparable aggregates, when compared with the latest available International Monetary Fund (IMF) data from the Comprehensive Direct Investment Survey for the ADB regional membership. The services sectors are found to receive considerably larger amounts of foreign investment, when compared with the Asian region's manufacturing and raw materials sectors. OECD countries account for roughly three-quarters of total recorded inward services sector FDI of about \$2 trillion, relatively evenly split between the United States, the EU-27, and regional OECD-level-income countries. The presence of sizable regional "upward flowing" services sector investments into OECD-level-income economies is verified. Preliminary policy conclusions are drawn based on the new transactional FDI data results concerning prospects for regional services sector liberalization, threshold income levels for inward services sector FDI, upward-flowing regional services FDI, and preferred modes of services sector investments.

JEL Codes: F21, F23, L8, N75, O14

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Measure what is measurable, and make measurable what is not so.

—Galileo Galilei

I INTRODUCTION

Why do services matter? Why do they matter particularly for Asia right now? And what do we actually know about them? The answer to the first question has been self-evident for a while, as services have grown to account for the majority of economic activity in the region. Asia's and the world's most advanced economies are today overwhelmingly "services economies," whether in terms of economic output, employment, or even increasingly their international trade and investments.

The answer to the second question is manifest when considering the growth realignment challenge ahead. Today, as Asia looks to refocus the region's economic future away from its export dependent growth model to a more evenly balanced economy with a greater role for domestic consumption, the need for regional leaders to implement economic reforms and policies to secure rapid expansion of and job creation in the services sectors is greater than ever. Without competitive and innovative services sectors, the Asian region risks developing bisected economies split between highly competitive but gradually less and less labor-intensive primary and manufacturing sectors and large but sclerotic, uncompetitive, and noninnovative services sectors. Relying on imitation rather than invention to generate sustainable services sector growth will not suffice to power the Asian region's continued economic convergence to fully developed economy status. Without vibrant services sectors, large parts of the region risk prolonged stagnation in the middle-income trap.

The answer to the third question, however, is invariably more tenuous, as large parts of the regional services sectors continue to be a relative terra incognita—especially in non-OECD Asia—in terms of our empirical understanding of how these diverse sectors actually function, the current extent of their global and regional integration, and the type of economic policy initiatives that might promote sectoral growth, job creation, and innovation. While the potentially very large aggregate economic benefits of liberalization of services sector trade and investment are conceptually acknowledged and have been empirically established,¹ little scholarly consensus, for instance, exists on the actual impact of the many global regional and bilateral services sector initiatives to date.²

1. See Hoekman (2006) and Hoekman and Mattoo (2008).

2. Hoekman and Sauvé (1994), Roy, Marchetti, and Lim (2006), Dee (2005), Ochiai, Dee, and Findlay (2007), and Fink and Molinuevo (2007) surveyed different samples of regional and bilateral agreements and concluded that the overall services commitments included in these agreements do not go much beyond the General Agreement on Trade in Services (GATS). At the same time, though, regional and bilateral agreements—especially investment agreements and agreements

This paper aims to help begin to address this lack of understanding of the services sectors in Asia and especially their potential impact on regional services sector job creation. Section II presents an innovative new micro-transactions based data source for the detailed analysis of services sector foreign direct investment (FDI) trends in Asia. Section III exploits the considerably higher data detail of this new transactional FDI data, compared with traditional IMF BPM5-compliant FDI data, to: (1) geographically map the origins of inward transactional FDI into Asia by detailed services sector; (2) establish the relative importance of intra-Asian services sector FDI flows; (3) investigate the variation in services sector investment inflows to Asian countries at different levels of economic development; and (4) explore the relative importance of modes of entry for inward transactional FDI in the services sectors between mergers and acquisitions (M&A) and greenfield investments. Section IV provides preliminary policy implications. In line with the overall focus of this project, the policy analysis emphasis is on the trends in developing Asia specifically and how they differ from developments in Asian countries with OECD-level incomes.

II A NEW DATA SOURCE FOR INVESTIGATING ASIAN SERVICES SECTOR FDI AND WHY IT IS NEEDED

Services sector analysis is a relatively recent discipline. Academic research on trade and investments in the services sectors is of far more recent origin than that on merchandise goods sectors, which traces its roots to some of the founding fathers of the political economy discipline, Adam Smith and David Ricardo. By most accounts, independent services sector research emerged as a separate scholarly branch only by the mid-1980s, triggered by the initiation of the Uruguay Round of multinational trade negotiations in 1986 in which the services sectors were included for the first time.³ Until about this time, academic trade, investment, and economic integration literature either did not treat services independently or explicitly assumed that the standard theoretical tools and concepts hitherto developed in merchandise trade and investment analysis, such as comparative advantage and other theories for the determinants of trade and investment, could be directly applied to the services sectors, too.⁴

By far the most important reason for the lack of timely, theoretically sound, and comprehensive analysis of trends and phenomena in the services sectors is the lack and limitations of relevant publicly available data material. This issue is aggravated by the sheer diversity of services, their intangible nature,

involving the United States and other large industrialized nations—have tended to have specified sectoral coverage beyond the commitments made by all participating countries at the GATS. See also Mattoo and Sauvé (2008).

3. See Feketekey (1988), Sapir and Winter (1994), Findlay and Warren (2000), Adlung et al. (2002), Hoekman (2006), and Copeland and Mattoo (2008).

4. See, for instance, Hindley and Smith (1984) and Deardorff (1982).

and multiple modes of delivery to the consumer,⁵ which makes them difficult and very costly to measure consistently, comprehensively, and validly. Even in the United States, which has the most wide-ranging services sector data collection efforts in the world, a long list of academic and government reports have highlighted critical data availability deficiencies.⁶

Correspondingly, there is a distinct risk that the general dearth and the resulting skewed global availability of services sector data, which originate almost exclusively in the OECD countries, lead to similarly geographically skewed results, reflecting empirical circumstances as they exist only in the OECD countries. In a rapidly globalizing world, where emerging markets now account for more than half of global GDP (IMF 2012b), this is an increasingly untenable data availability situation, which in particular risks undermining support for new services sector policy initiatives outside the OECD. In the case of the Asian region, for instance, leaders risk being obliged to propose new regional services policy initiatives “in the blind” due to the lack of comprehensive empirical data covering the region’s services sectors.

“It’s Worse Than You Think”—Traditional Sources of FDI Data in Asia

The standard source of data for research and analysis of FDI trends is the FDI data collected in accordance with the statistical guidelines in the IMF Balance of Payments Manual (BPM5)⁷ by national statistical agencies and then passed on for agglomeration and publication by international organizations like the IMF itself and UNCTAD. Due to the historical lack of alternative comprehensive data sources, BPM5-compliant FDI data have become researchers’ default data option, but it is important to understand that substantial validity weaknesses surround these data, making their use for services sector specific analysis for a diverse region like Asia potentially problematic. First of all, there is the issue of the highly diverse caliber of national FDI data collection standards in Asia. Of the 48 regional members of the Asian Development Bank (ADB), just 14 currently observe the IMF’s verifiable Special Data Dissemination Standard (SDDS) for coverage, periodicity, timeliness, quality, and integrity of data,⁸ while another 18

5. The GATS in 1994 recognized and codified four modes of supply: cross-border supply, consumption abroad, commercial presence, and presence of natural persons. However, technological innovation and the spread of the commercial internet—through, for instance, purely web-based services—have since added to these four originally defined modes of supply. See also Mirza and Nicoletti (2004). Only GATS mode 3 commercial presence is directly related to FDI.

6. See, for instance, Feenstra et al. (2010), Houseman (2009), National Academy of Public Administration (2006a, 2006b, 2007a, 2007b), National Research Council (2006), Sturgeon/Sloan Foundation (2006), GAO (2004, 2005), and Office of Senator Joseph Lieberman (2004).

7. This paper generally refers to the IMF Balance of Payments Manual, Fifth Revision (BPM5). The IMF in 2010 released the 6th edition of the BPM, which is in the process of being implemented among the IMF membership and involves some changes in the definitions of FDI. See IMF (2011).

8. The 14 ADB regional members are Armenia, Australia, Georgia, Hong Kong, India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Malaysia, Philippines, Singapore, South Korea, and Thailand. See <http://dsbb.imf.org/Pages/SDDS/CountryList.aspx>.

are members of the IMF General Data Dissemination System (GDDS), which is a voluntary capacity-building exercise aimed at encouraging member countries to improve data quality.⁹ Due to the associated potential lack of true data value comparability, despite the same published source in the IMF Balance of Payments (BOP) statistics, some care should consequently be taken when comparatively interpreting such national FDI data from across the Asian region.

This issue is aggravated by the composite nature of standard BPM5-compliant FDI data. As part of the broader BOP accounting framework for summarizing an economy's total transactions with the rest of the world in an ongoing manner, the direct investment (e.g., FDI) category comprises not only the initial transaction establishing the relationship between a foreign investor and the investment enterprise but also all subsequent transactions between them. Reported direct investment flows comprise:¹⁰

1. *Equity Capital*: equity, shares, and other capital contributions.
2. *Reinvested Earnings*: the direct investor's share of earnings not distributed as dividends and earnings of wholly owned branches not remitted to the direct investor.
3. *Other Direct Investment Capital* (or intracompany debt transactions): the borrowing and lending of funds between direct investors and subsidiaries, branches and associates. Both loans to subsidiaries from direct investors and loans from subsidiaries to direct investors are included.

The three components of FDI flows are evidently conceptually quite different and consequently require separate collection efforts by statistical authorities to validly capture and report all FDI flows. Initially, new FDI relationships will almost invariably take the form of equity capital, and equity capital investments can consequently frequently be tracked by monitoring M&A transactions, as well as new greenfield (ex nihilo) investments, where 100 percent of the new project invested funds can be assumed to be equity capital. Meanwhile, regular collection of data for both the reinvested earnings and other capital categories of FDI will typically require, for instance, regular monitoring of multinational corporations' (MNCs) quarterly and annual financial statements or regular implementation of large industry surveys.

Given the ongoing improvement of data collection efforts across Asia, which are resulting in a gradual expansion of such efforts, the composite nature of the BPM5 FDI data category does raise concerns when interpreting standard FDI data time series. This is illustrated in figure 1 with available BPM5- and SDDS-compliant FDI data for outward FDI from India from 1993 to 2010.

9. These are Afghanistan, Azerbaijan, Bangladesh, Bhutan, Brunei, Cambodia, China, Fiji, Kiribati, Maldives, Nepal, Pakistan, Papua New Guinea, Solomon Islands, Tajikistan, Tonga, Vanuatu, and Vietnam. See <http://dsbb.imf.org/Pages/GDDS/CountryList.aspx>.

10. See BPM5 at IMF (2003, 87f).

Two relatively clear breaks in the total reported outward Indian FDI flows are visible in figure 1: the first relatively modest uptick starting in 2000–01 and then a much larger increase in 2005–06. However, as illustrated by the stacked bars, until 2001 reported aggregate Indian outward FDI data consisted only of equity capital. The increase in total reported Indian FDI from 2000 to 2001 is largely due to the inclusion of the reinvested earnings and other capital categories in the aggregate number from 2001 onwards.¹¹ Other attempts at interpreting the increased outflows of Indian FDI after 2000 would be erroneous.

On a broader level, the fact that the BOP data reporting and collection framework produces most FDI data utilized in academic research and analysis gives rise to an issue of analytical focus. The BOP is an accounting framework, focused on collecting timely data on all countries' cross-border activities and in particular the flow of transactions between individual countries. This is manifested in the regular BOP framework output in the form of data on trade balances, current account balances, FDI inflows and outflows, and international investment position (IIP) updates. As a result of the completeness of this BOP reporting framework, FDI flow data from the BOP financial account is a complex aggregate entity that consists of three conceptually different types of investment capital flows in equity, reinvested earnings, and intracompany debt flows.

At the same time, much of the academic research on and theories about the role played by FDI is not terribly concerned with FDI as merely one of many different types of reported cross-border transactions and financial flows. Instead, the interest in FDI is often premised on the assumption that we care about “who owns what and where”¹² and that foreign ownership of enterprises “makes a difference” and often plays a critical role in technology and know-how diffusion between countries, as a foreign market penetration strategy for successful companies and for cost optimization of complex global supply chains. This is a very different analytical focus than the methodical recording of all cross-border transactions for which the BOP framework was designed and is operated today.

Recorded values of, for instance, FDI flows in the form of the composite direct investment category in the BOP financial account may represent very different things depending on which of the subcategories dominate with significant implications on the theoretical interpretation of this reported data value. It would seem, for instance, that the implications for cross-border technology transfers would be

11. Referring to the country notes for India in the IMF BOP Statistics confirms this by stating that: “Up to 1999/2000, direct investment in India and direct investment abroad comprised mainly equity flows. From 2000/2001 onward, the coverage has been expanded to include, in addition to equity, reinvested earnings, and debt transactions between related entities.... Because of this change in methodology, data for years before 2000/2001 are not comparable with data since then” (IMF 2012a).

12. Many countries today have approval processes for foreign direct investments to ensure that they do not pose national security threats. See, for instance, Graham and Marchick (2006) for an in-depth analysis of the Committee on Foreign Investments in the United States (CFIUS).

different for recorded FDI transactions consisting largely of an infusion of new equity capital, rather than reinvested earnings or intracompany loans, with far better prospects in case of the former. In some ways therefore, it might be preferable for scholars interested in the broader effects of foreign investments in an economy to rely solely on the equity capital component of BPM-compliant FDI flows. This is particularly so, as a large existing literature on the effects of corporate tax systems on MNCs' decisions on dividend payments and capital structure suggests that these types of capital flows (e.g., the reinvested earnings and other capital categories in recorded total FDI flow data) are heavily influenced by MNCs' ongoing tax optimization strategies.¹³ Ultimately, precise theoretical interpretation of many reported values of aggregate FDI flows and stock values as extracted from the BOP financial account and IIP may as a result be difficult to deduct.

For the purposes of closer analysis of the economic effects of foreign direct investments on host economies, an additional and far more fundamental data flaw resides in the standard sources of FDI data—namely the fact that BPM-compliant data are aggregate economywide data that are not broken down by the sector of investment. Theodore Moran (2011, 1ff), in his seminal discussion of the first generation of FDI research, puts the issue bluntly:

FDI flows come in at least three—probably four—separate forms: FDI in extractive industries, FDI in infrastructure, and FDI in manufacturing, plus the under-researched field of FDI in services. Each form presents such distinctive policy challenges for developing-country host authorities, and generates such diverse impacts on the developing host economy, as to undermine the usefulness of any research that does not disaggregate the FDI flows.... The use...of aggregate data is like asking whether or not the FDI tree produces fruit punch (apples, oranges, bananas, and pears)? The idea that FDI has some generalized positive or negative impact on host-country growth does not make sense. More importantly, phrasing the question this way obscures what may be very different kinds of effects, and muddles what are very distinctive policy challenges.

This critically important issue is obviously of very direct relevance to this paper, given its focus on services sector FDI, and effectively renders the standard sources of aggregate BPM-compliant FDI data useless for this paper.

In summary, for the combined reasons of national data collection efforts still a work in progress in Asia and the composite and sectorally aggregate nature of traditional FDI data, this paper must seek new innovative sources of information about the flows of investment in and out of Asian services sectors.

13. See, for instance, Hufbauer (1992), Hufbauer and Assa (2007), Desai and Hines (2001), Desai, Foley, and Hines (2005a, 2005b, 2006, 2007), and the research summarized in OECD (2008a).

A New Source of Sector- and Country-Specific Investment Data for Services Sector Analysis

The compilation of datasets from new sources,¹⁴ which include the requisite data detail, is a prerequisite for meaningful services sector specific analysis. Contrary to the vast majority of publicly available data, which is specifically collected on a national basis by countries' public statistical agencies and reported by international organizations like the IMF and UNCTAD, this paper argues that with the rapid expansion in easily available information flowing directly from financial markets and related transactions, an informative macroeconomic dataset for detailed foreign investment flows in and out of countries can be assembled relying on micro-level data for individual M&A transactions and individual greenfield investments.

The shift towards new micro-level data sources is well advanced in the more recent international trade and investment literature. Relying increasingly on firm-level data, empirical researchers have focused on the study of the behavior of especially multinational firms, with an explicit emphasis on the role of the heterogeneity of firms, their margins, and products when determining global trade and investment flows. Utilizing a micro-level transaction-based dataset to measure FDI trends in the global economy should be seen as a natural continuation of this long trend in the analysis of international trade and investment.

While such a dataset would be conceptually different from traditional FDI data collected according to the BOP framework, it would through greater sectoral and geographic detail and its categorical breakdown into M&A and greenfield type investments enable empirical analysis not possible by relying on traditional data.

Moreover, utilizing investment data broken down in this way by foreign investor "mode of entry," follows the recommendations for "supplemental FDI data series" of the 4th OECD Benchmark Definition of Foreign Direct Investment, which suggests that "[S]uch a subset of FDI data will allow refinement of the qualitative analysis of FDI in home and host countries" (OECD 2008b, 31). Especially from the perspective of the destination country, it may matter greatly whether inflows of FDI come in the form of newly created assets (greenfield investments) or relate to the transfer to foreign control of existing domestic assets (M&A transactions).¹⁵

A detailed empirical analysis relying on this type of data moreover constitutes a natural extension of the aggregate data for M&A and greenfield transactions data published regularly by UNCTAD in their

14. See, for instance, Jensen (2011) for another example of a new innovative data source compiled specifically for services specific research.

15. A sizable theoretic economic literature already exists focusing on the causes and effects of the choice of FDI mode between M&A and greenfield. See, for instance, Görg (2000), Norbäck and Persson (2002), and Nocke and Yeaple (2004).

annual *World Investment Reports* since 2005.¹⁶ The two new underlying data sources, their strengths and weaknesses and conceptual overlaps with and differentiation from traditional BPM5-compliant FDI data, are presented in detail in Kirkegaard (forthcoming).

III TRANSACTIONAL FDI IN ASIA

Comparing Cumulative Transactional FDI Values with Available BPM5-Compliant FDI Stock Data

Transactional FDI data are a new source of information about cross-border investment flows, which offer substantially higher data detail than traditional standard BOP-based FDI data. Transactional FDI is methodologically very different from such data, although comparisons of cumulative transactional FDI data values show relatively identical values with the most recent BPM5-compliant FDI stock data from the IMF's Coordinated Direct Investment Survey (CDIS) for those Asian countries where both data points are available. Tables 1a and 1b show cumulative transactional FDI data values for all regional members of the ADB for which recorded transactions are available¹⁷ and contrast cumulative transactional FDI data with the latest available comparable IMF CDIS data values for end-2010.

Table 1a shows the cumulative inward transactional FDI value for regional ADB members at the end of 2011 at \$4.1 trillion. China is by a sizable margin the largest recipient of transactional FDI with \$1.1 trillion in recorded inward transactions, followed by Australia and India at just over \$500 billion, Vietnam, Singapore, Indonesia, Japan, and Hong Kong at around \$200 billion, and South Korea and Malaysia with more than \$100 billion in cumulative inflows. As a share of country 2011 GDP, though, China's inflows amount to merely 15 percent, noticeably half of India's 32 percent and far below Vietnam's almost 200 percent of GDP. Entrepot economies Hong Kong and Singapore have a comparable roughly three-quarters of GDP in cumulative inward transactions, above Malaysian and Philippine levels of about 40 percent of GDP, Indonesia and Thailand at about a quarter, and South Korea and Japan at a measly 13 and 3 percent, respectively. Among the smaller economies, Cambodia, Laos, and Papua New Guinea all have recorded inward transactions of about 100 percent or more of GDP as well, while for regional ADB members as a whole, cumulative recorded inward transactions amount to 19 percent of 2011 GDP.

When comparing cumulative transactional FDI values with the latest available IMF CDIS data for BPM5-compliant FDI stocks for end-2010, it is evident that same-country cumulative transactional FDI at \$3.3 trillion are considerably smaller than recorded aggregate inward CDIS FDI stocks of

16. See <http://www.unctad.org/Templates/Page.asp?intItemID=1485&lang=1>.

17. No greenfield or M&A transactions were recorded for six regional ADB members: Kiribati, Nauru, Palau, Timor-Leste, Tonga, and Tuvalu.

\$4.7 trillion in ADB regional members. In the far right column of table 1a, it is evident that the vast majority of the total discrepancy between transactional FDI values and CDIS FDI stocks is attributable to far higher recorded CDIS values in Hong Kong and China. The origins of these discrepancies can be numerous, given the axiomatic differences in data methodologies between the two datasets. However, it is noteworthy that in recorded CDIS data, more than 70 percent of Hong Kong's end-2010 inward FDI stocks originate in just two destinations, China and the British Virgin Islands, while about 60 percent of China's end-2010 inward FDI stocks originate in Hong Kong and the British Virgin Islands. Consequently, it seems likely that the principal reason for the large discrepancies between cumulative transactional FDI values and CDIS stocks lies in the fact that transactional FDI data are collected on a ultimate ownership basis and to a significant extent eliminate "round tripping" investment flows and the role of tax havens. As a result, while the correlation between the two datasets are unsurprisingly quite high at 0.83,¹⁸ cumulative transactional FDI data values seem the superior data sources for the two countries in question.

Beyond the large revealed discrepancies for China and India, table 1a shows considerably higher transactional FDI values when compared with CDIS FDI stocks in India, Philippines, and Pakistan, while values are noticeably lower for Singapore, Japan, and Thailand. Of the 21 regional ADB members for which end-2010 CDIS data are available, 12 countries have higher cumulative transactional FDI values and 9 countries lower cumulative values.

Turning to cumulative outward transactional FDI, table 1b shows \$3.3 trillion in included transactions for regional ADB members at end-2011, accounting for roughly 15 percent of regional GDP. Japan is by far the region's largest outward investor with almost \$1 trillion in recorded transactions, followed by Australia, China, South Korea, India, Hong Kong, Singapore, Malaysia, and Taiwan, all with more than \$100 billion in cumulative outward transactions. As a share of GDP, Japan's 16 percent and India's 17 percent are roughly on par with the regional average, while Australia, South Korea, Malaysia, Taiwan, and the two entrepot economies are more intensive outward investors. China meanwhile at just 5 percent of 2011 GDP in cumulative outward transactions is not yet a particularly intensive foreign investor.

Comparing cumulative outward transactional FDI values with the latest available end-2010 IMF CDIS BPM5-compliant outward FDI stocks shows a much more comparable aggregate number at \$2.2 trillion and \$2.4 trillion, respectively, although this is likely related to the lower CDIS data availability for outward FDI stocks. While again the correlation between the two datasets at 0.81 is relatively high,

18. The vast differences in underlying country GDPs should show up in aggregate numbers for inward FDI at relatively similar levels, irrespective of differing data methodologies.

by far the largest discrepancy is once more found in Hong Kong, where IMF CDIS data are almost \$600 billion larger than recorded cumulative transactions. Again the possible sources for this discrepancy are numerous, but the fact that 85 percent of Hong Kong's IMF outward CDIS FDI stocks are found in the British Virgin Islands and China suggests that the issues of ultimate ownership basis are to blame for a second time.

Apart from Hong Kong, table 1b reveals significantly higher recorded cumulative outward transactions in India, South Korea, Australia, and Malaysia. Higher cumulative transactional data levels when compared with available CDIS data outnumber lower values by four to one, possibly indicating a broadly more comprehensive country coverage for outward FDI data collection in many non-OECD members in Asia.

Transactional FDI in Regional ADB Members by Meta Sector

Before drilling into the finer details of services sector transactional FDI in Asia, it is valuable to dwell briefly on relative distribution of all inward and outward FDI, i.e., including FDI in the manufacturing, composite, and raw materials sectors. Table 2 breaks down cumulative transactional FDI from 1988 to 2011 by meta sector, while appendix table A.1 lists the sectoral components of each.

Table 2 shows for both inward and outward transactional FDI that the services sector is the single biggest individual meta sector, followed by the raw materials sector, the manufacturing sector, and the composite sector. Given the traditional importance of the manufacturing sector in Asian FDI, it is striking that in terms of investments, it is only the third most important in the region. Table 2 moreover illustrates that the regional ADB members were net recipients of recorded transactional FDI over the period in all four meta sectors, although relatively more so in the composite and services sectors. Since the composite sector comprises sectors that are characterized by a degree of assumed vertical integration, i.e., includes transactions that could be classified in both the manufacturing and services sectors, to ensure that services sector transactions are as comprehensively covered as possible, the composite sector will for the remainder of this paper be merged with the services sector.

Inward Transactional Services FDI in Asia in Detail

Probably the key advantage of analyzing cross-border investment flows using transactional FDI data is the far superior data detail this type of data offer. For the purposes of this paper, the detailed data analysis emphasizes the country, sector, and entry mode data detail, but at the expense of time-series creation. The focus is on descriptive analysis of cumulative country pair, sector, and entry mode transactional FDI values, estimated over the broadest available and relevant time periods and expressed in cumulative dollar investment inflow terms.

Given the large differences in economic development levels among the regional ADB membership, where relevant the group will be broken up into the four country income groups utilized in the World Bank *World Development Indicators*:¹⁹ OECD-level-income countries, upper-middle-income countries, lower-middle-income countries, and low-income countries. The ADB regional membership represented in the dataset has accordingly been split into the following four country groups:

- *OECD-level-income countries (\$12,276 or more)*: Australia, Brunei, Hong Kong, Japan, New Zealand, Singapore, South Korea, and Taiwan.
- *Upper-middle-income countries (\$3,976 to \$12,275)*: Azerbaijan, China, Cook Islands, Kazakhstan, Malaysia, Maldives, and Thailand.
- *Lower-middle-income countries (\$1,006 to \$3,975)*: Armenia, Bhutan, Fiji, Georgia, India, Indonesia, Laos, Marshall Islands, Micronesia, Mongolia, Pakistan, Philippines, Papua New Guinea, Samoa, Solomon Islands, Sri Lanka, Turkmenistan, Uzbekistan, Vanuatu, and Vietnam.
- *Low-income countries (\$1,005 or less)*: Afghanistan, Bangladesh, Cambodia, Kyrgyzstan, Myanmar, Nepal, and Tajikistan.

In accordance with the overall focus of this project, the analytical discussion focuses on trends in low, lower middle, and upper middle income ADB regional members, and how these differ from OECD-level-income countries. Relatively less focus is put on OECD-level-income country specific trends.

Inward Transactional FDI by Detailed Services Sector

Beginning by breaking available transactions into specific services sectors, table 3 breaks out cumulative inward services transactional FDI between 1988 and 2011 by detailed services sector and recipient country income group.

Transactional services sector FDI into Asia has been dominated by activity in just three of the total of 15 sectors. Inflows in the large financial services, construction and real estate, and transportation services sectors account for roughly \$1 trillion in cumulative inflows, or about half of the recorded total.²⁰ Significant cumulative inward investments of between \$100 billion and \$200 billion are found in the automotive original equipment manufacturer (OEM) and related services, food and tobacco, hotels and tourism, and telecommunications and equipment services sectors. Software and IT services

19. Available at http://databank.worldbank.org/ddp/viewClassifications?HIERARCHY=Classification&DIMENSION=WDI_Ctry.

20. After having established that financial services are only one of three roughly similar-sized top inward investment sectors in Asia, this sector is not analyzed in further detail.

and consumer products and related retail each amount to between \$80 billion to \$100 billion, while warehousing and storage, business services, leisure and entertainment, and textiles and related stores have all seen investments inflows of about \$50 billion. Nonautomotive transport OEM and related services and healthcare have the least investments at \$20 billion or less.

Looking at the aggregate inflows in table 3 it is immediately clear that foreign investment inflows to the least developed ADB members' services sectors have to date been trivial in scope at only \$15 billion, which might suggest that such investments have modest future potential, too, to be a driver of economic growth and job creation in these countries. Yet, when viewed as a share of aggregate country income group 2011 GDP, the inward investment intensity in low-income countries is only slightly below the average for ADB regional members.

On the other hand, at more than \$500 billion, cumulative inflows into the lower-middle-income countries makes it clear that, while low-income countries may be too poor to attract numerically large services sector investment inflows, significant such potential exists in still relatively poor economies. Indeed, lower-middle-income countries at 10 percent of 2011 GDP have the highest inward services investment share. In other words, services sector FDI is not an economic activity reserved for developed economies. The fact that upper middle income country aggregate services sector inflows are close to the aggregate level of the region's OECD level income countries similarly suggests that this group of countries offers sizable opportunities for foreign services sector investors.

Excluding the financial services sector does not materially change this situation, as table 3 shows how nonfinancial inward investments remains relatively evenly distributed across country income groups, and lower-middle-income countries at 9 percent of 2011 GDP have the highest nonfinancial inward services investment share. In dollar terms, too, upper-middle income ADB members at \$615 billion have attracted more nonfinancial services investments than ADB OECD-level members.

Inward Transactional Services FDI by Source Country and Country Income Group

Table 4 turns to the issue of the sources of inward transactional FDI into the regional ADB members and breaks these inflows into OECD and non-OECD sources or origin and intra-ADB (regional member) FDI; the latter group is broken down into inward transactional FDI originating in OECD-level, upper-middle, lower-middle, and low-income ADB regional members. Recipient regional ADB members are similarly broken into country income groups.

Table 4 shows how roughly three-quarters of total inward services sector transactional FDI into the region comes from OECD countries. Regional OECD-income-level countries, the United States, and the EU-27 each accounts for about half a trillion in cumulative inflows. Regional upper-middle-income countries account for more than \$160 billion in cumulative intraregional investments, lower-middle-

income countries about \$50 billion, while unsurprisingly low-income regional countries are insignificant outward services sector investors at just \$772 million in recorded transactions. Apart from the OECD countries, the largest services sector investors in the region are mostly regional in Singapore, Hong Kong, and China, with the United Arab Emirates the only sizable non-OECD investor outside the region.

Looking at services investment only in regional OECD-level-income countries, again about 75 percent is from OECD sources, while just under 40 percent is intra-ADB investments mostly from one OECD-level country to another. On the other hand it is noteworthy how China is the third largest individual investor in regional OECD-level-income countries (mostly accounted for by investments in Hong Kong),²¹ while Malaysia also has sizeable services sector investments “flowing upwards” to OECD-level-income countries (mostly into Singapore).²² Investments into regional upper middle income countries are roughly distributed in a similar geographic manner as investments into OECD level income countries, although the most developed economies in the region play a considerably larger role in intraregional investments accounting for almost \$240 billion out of a total of \$280 billion in services sector investments.

Turning to lower-middle and low-income recipient countries, OECD-country investors again account for the lion’s share of investments in both groupings, but it is visible how regional upper-middle-income countries are also sizable sources of investors into less economically developed economies in the region at \$46 billion and \$3 billion, respectively. The same is true for lower-middle-income-country investments into low-income economies, with India and Vietnam among the top-10 individual investors into the services sectors in the least developed economies in the region.

Inward Transactional FDI by Sector, Mode of Entry, and Country Income Group

By making available a data breakdown by mode of entry of investment into greenfield and M&A type investments, the transactional FDI dataset provides a novel empirical basis for the analysis of management strategies and the host-country impact of inward FDI, a key area of interest for regional policymakers.

Figure 2 initially for comparison purposes plots the share of greenfield investments in total investments for all the three meta sectors, e.g., manufacturing, raw materials, and services (composite + services categories), for the time period from 2003 to 2011, where both greenfield and M&A transactions are available. It can be seen how initially during the period the relative importance of greenfield projects was considerably greater in the region in both the manufacturing and raw materials sectors at over 90 percent until the mid-2000s, relative to the services sectors. At the same time, it is visible how M&A

21. More than \$50 billion of recorded Chinese investments have gone into Hong Kong.

22. About \$17 billion of recorded Malaysian investments have gone into Singapore.

transactions gradually become more important in manufacturing and raw materials after 2006, so that by the latest available data for 2011, the relative importance of greenfield projects is roughly similar across all three sectors at around 75 percent of total inward transactional FDI into the Asian region.

Table 5 breaks down the relative importance of greenfield and M&A transactions in inward transactional services sector FDI for each individual recipient regional ADB member. A distinct difference is visible in the relative role played by M&A transactions between the most developed OECD-level-income economies (excluding Brunei) in the region and the rest. Whereas the weight of greenfield transactions ranges between roughly 40 and 60 percent, e.g., about half, in Australia, Hong Kong, Japan, Singapore, South Korea, Taiwan, and New Zealand (lowest at just 22 percent), it is around 90 percent for China, India, Vietnam, Pakistan, and essentially all the smaller regional ADB members. Countries like the Philippines, Malaysia, Indonesia, Kazakhstan, and Thailand have marginally lower weights of greenfield investments at around 80 percent of total inflows.

Table 6 goes further and breaks down regional inward transactional FDI into detailed services sectors, mode of entry, and income group of the recipient country for the time period between 2003 and 2011, where both greenfield and M&A transactions are available. Table 6 again shows how greenfield investments overall are by far the most important mode of entry for services sector FDI, accounting for 75 percent of total inflows. There are, however, sizable differences between individual services sectors with just over a third of total investments in the small healthcare sector of a greenfield nature, and in the big financial services sector just over half of inward investments are so. Meanwhile, inward investments in other services sectors are almost wholly greenfield, with more than 90 percent in automotive OEM and related services, hotels and tourism, textiles and related stores, and warehousing and storage.

The sizable difference in the relative importance of greenfield investments among individual country income groups is again visible. The OECD-level-income countries are distinct in that here greenfield investments are much less important than M&A transactions, while in the three other country income groups, greenfield investments completely dominate.

It is beyond the scope of this paper to go into a detailed analysis of why in some countries and sectors greenfield investments dominate and M&A transactions are so relatively rare. Yet, for instance, when viewed through the lenses of industrial organization theory, it is not surprising that some regional ADB members have experienced very low levels of inward transactional FDI through M&A activity over the years. These countries quite likely possess very few eligible local target companies available for foreign would-be purchasers. Unlike, for instance, OECD-level-income countries, less developed economies rarely offer much market size for foreign multinationals, and local firms in all probability will possess few strategic assets like R&D capacity or intellectual property assets. In short, the less developed Asian members will, partly as a result of their lower level of economic sophistication, host few eligible targets

for foreign acquisitions, especially by multinational companies from OECD nations. An important part of a country's economic infrastructure that greatly facilitates the possibility for M&A transactions is the presence of a liquid and transparent local stock market for trading the ownership of domestic firms.

In the services sectors, moreover, a particular long-term regulatory shift, which in several parts of the world has led to sizable increases in inward M&A, is privatization transactions. Here foreign companies have frequently taken over a controlling part of the equity in a formerly state-owned company. Unlike in most OECD countries, where privatization programs mostly target domestic buyers, privatizations in developing countries, especially in capital-intensive services industries such as telecommunications and gas and power utilities, frequently involve foreign companies. UNCTAD (2000) identifies Latin America and Eastern Europe as regions where foreign acquisitions of privatized state assets accounted for the majority of total proceeds in several services sectors.

It is less obvious that privatization proceeds have been a major source of government revenue or inward M&A transactions among the ADB regional membership. The World Bank/IFC Privatization Database,²³ which includes over 10,000 individual government divestments between 1988 and 2008, shows that only about 1/3 of globally recorded privatization proceeds (worth a total of \$773 billion) flowed to national treasuries in the region over this 20-year period. And of these, China alone accounted for almost \$200 billion, meaning that the ADB regional membership ex-China has accounted for just over \$80 billion, or 10 percent of global privatization proceeds, since the late 1980s. Considering the remarkable economic development in the region over this period, that seems a very low level of privatization revenue, which will likely have added to the relatively limited importance of M&A transactions in regional inward FDI.

Inward Transactional FDI by Source Country, Mode of Entry, and Recipient-Country Income Group

A further way to look at the relative importance of each mode of entry is to break down the preferred investment mode by the source country. This is done in table 7, which breaks down transactional inward investments by mode of entry, source country, and the recipient-country income group.

Table 7 shows several trends. It is thus interesting to see how the relative importance of greenfield investments in all investments made by upper-middle-income countries in Asia is only 52 percent overall, noticeably lower than for other categories of investors. The upper-middle-income-country investor preferences for M&A transactions is relatively concentrated in "upward flowing" investments into OECD-level-income countries, where the weight of greenfield investments drops to just 18 percent. Looking at the individual source countries, it becomes clear that the majority of these upper-middle-income-country services sector "upward investment flows" comes from China and Malaysia and go into

23. Available at <http://rru.worldbank.org/Privatization>.

Hong Kong and Singapore, respectively. The fact that they are conducted through M&A transactions into a more developed market suggests that investors from these two countries are either seeking to acquire advanced know-how and additional capabilities from their target, have sufficient cheap capital to purchase their way to an expeditious market entry, or perhaps are denied other ways of entering these more developed economies. A similar pattern can be found even for the services investments made by lower-middle-income countries, such as India, into regional OECD-level-income countries, where the relative importance of greenfield and M&A transactions is about even at 52 percent in favor of the former.

IV CONCLUDING REMARKS AND POLICY IMPLICATIONS

This paper has outlined the need for new innovative data sources to complement traditional BPM5-compliant FDI data from international organizations to enable detailed sector-specific analysis of services sector trends and developments. Without such new detailed data, the material for services sector investment analysis will remain scarce and the potential to provide empirical support for new investment initiatives impaired. In response, this paper presents new micro-level data consisting of individual greenfield investment projects and mergers and acquisitions as a source for detailed analysis of services sector cross-border investment flows among the ADB regional membership in Asia.

The new transactional FDI data are methodologically completely distinct from traditional BPM5-compliant FDI data but found to yield generally comparable aggregates, when compared with the latest available IMF data from the Comprehensive Direct Investment Survey for the ADB regional membership. The services sectors are found to receive considerably larger amounts of foreign investment, when compared with the Asian region's manufacturing and raw materials meta sectors, while substantial divergence is found among the ADB regional membership in terms of the most important meta sector for inward transactional FDI in individual economies. Given the traditional prominence of and policymaker interest in FDI into the Asian manufacturing sectors, this is a surprising result.

The three largest roughly similar sized individual services sectors for inward transactional FDI are financial services, construction and real estate, and transportation services sectors, accounting for about half of total inflows. The remainder of inward investments is relatively evenly distributed across the 12 other identified sectors, although the economically important healthcare sector is noticeably smaller than other sectors. In dollar terms, services sector inflows is found to be well distributed across OECD-level, upper-middle, and lower-middle income groups, while only a small level of investments have flown towards the region's least developed economies. When measured as a share of GDP, however, the relative inward transactional FDI intensity across the four country income groups is broadly similar. In other words it is a fallacy to believe that cross-border services sector investments in Asia are overwhelmingly entering only the most developed economies.

OECD countries account for roughly three-quarters of total recorded inward services sector FDI of about \$2 trillion, relatively evenly split between the United States, the EU-27, and regional OECD-level-income countries. Total intra-ADB investment flows account for just over one-third (37 percent, or \$765 billion) of total regional inflows, with upper-middle, lower-middle, and low-income countries accounting for a relatively small one-quarter of total intra-ADB investments. The presence of sizable regional “upward flowing” services sector investments into OECD-level-income economies is verified, especially from China and Malaysia into Hong Kong and Singapore, respectively. The region’s middle-income countries are, moreover, sizable investors into the services sectors of poorest nations among the ADB regional membership.

Greenfield transactions are found to be by far the most important mode of investments into the region’s services sectors, accounting for fully 75 percent of all inward investments. However, among the region’s most developed economies, M&A transactions account for the majority of total services sector investment inflows, while greenfield is the overwhelmingly popular choice in the poorer parts of the region. Healthcare, telecommunications, financial services, food, tobacco and related stores, and business services are found to be the sectors where M&A is most prevalent and account for at least one-third of total investments. Lastly, “upward flowing investments” into the more developed regional services sectors are found to occur mostly in the form of M&A, especially originating in China, Malaysia, and India.

While this paper has been mostly devoted to the presentation of a new data source, several policy implications can be drawn from the preliminary overview data analysis presented.

First of all, it is clear that whatever trade and investment restrictions might exist in the Asian region’s services sectors today—and they are formidable—it has not prevented transactional investment inflows from surpassing those going into the local manufacturing sectors. This should strongly signal to Asian policymakers that very significant foreign investor interest in entering these sectors from inside and outside the region is present. In all probability, future moves to liberalize Asia’s services sectors will correspondingly be met with an overwhelming investor response: Open up and they will come.

Second, it is clear that foreign investors have been willing to invest sizable sums in Asian countries at all levels of economic development. As a share of GDP, the investment intensity in Asia is the same across country income groups, something only slightly less true in nonfinancial services. In other words, there is no empirical foundation for a claim that “poorer countries can open up for foreign investments only when they reach a certain threshold level of economic development.”

Third, it is clear that as sizable upward-flowing intra-ADB nonfinancial services sector investment flows exist, the source countries of such flows—noticeably China, Malaysia, and India—have seemingly relatively little to fear from more competition in their domestic services sectors from advanced-economy foreign entrants. After all, their firms are already taking over companies and entering the advanced economies in the region.

Fourth and finally, it is clear that as the vast majority of inward services sector FDI is greenfield investments, it is not obvious why more foreign investment into the region's services sectors will not have a significant positive impact on regional job creation. At least as the relative weight of greenfield investments at roughly 75 percent is the same today as in the manufacturing and raw materials sectors, there is little reason to suggest that the first-order job creation intensity in the services sectors will be noticeably worse than in other sectors.

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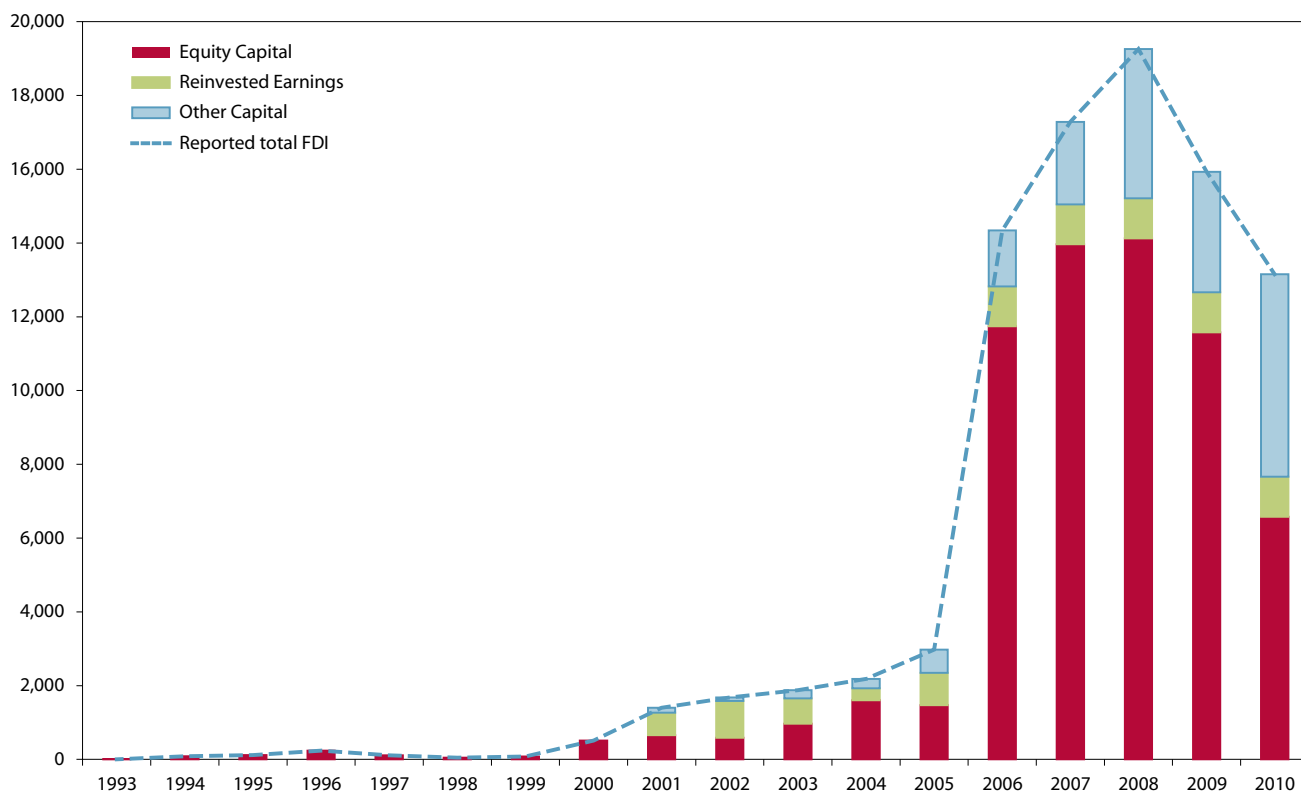
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Figure 1 Outward FDI from India, 1993–2010

millions of dollars



Source: IMF Balance of Payments Statistics (BOPS), March 2012.

Table 1a Cumulative Asian inward transactional FDI and IMF CDIS stock (millions of US dollars)

ADB regional member	Inward transactional FDI		Comparison with IMF CDIS end-2010 FDI stock data		
	End-2011 cumulative transactional FDI	Percent of 2011 country GDP	End-2010 cumulative transactional FDI	End-2010 IMF CDIS FDI stocks	Difference between transactional FDI and CDIS FDI values
Cook Islands	1.2	n.a.	n.a.	n.a.	n.a.
Vanuatu	11.3	2	n.a.	n.a.	n.a.
Marshall Islands	44.5	n.a.	n.a.	n.a.	n.a.
Micronesia	65.9	n.a.	n.a.	n.a.	n.a.
Bhutan	309.4	21	223.7	54.9	168.8
Solomon Islands	360.9	43	n.a.	n.a.	n.a.
Samoa	519.4	82	n.a.	n.a.	n.a.
Nepal	1,420.3	8	1,288.3	522.3	766.0
Fiji	1,497.0	42	n.a.	n.a.	n.a.
Maldives	4,335.1	223	n.a.	n.a.	n.a.
Afghanistan	4,580.3	25	n.a.	n.a.	n.a.
Tajikistan	5,075.1	78	n.a.	n.a.	n.a.
Mongolia	5,304.8	62	n.a.	n.a.	n.a.
Kyrgyzstan	6,104.6	103	5,675.5	1,033.8	4,641.7
Myanmar	6,950.9	13	n.a.	n.a.	n.a.
Armenia	7,693.2	76	6,882.7	4,338.2	2,544.5
Laos	8,294.7	105	n.a.	n.a.	n.a.
Brunei	9,908.3	64	n.a.	n.a.	n.a.
Bangladesh	10,643.7	9	10,153.6	6,196.3	3,957.3
Sri Lanka	10,895.6	18	n.a.	n.a.	n.a.
Cambodia	12,157.5	95	n.a.	n.a.	n.a.
Turkmenistan	12,802.1	50	n.a.	n.a.	n.a.
Georgia	13,251.0	92	11,259.7	8,145.0	3,114.7
Uzbekistan	19,827.9	44	n.a.	n.a.	n.a.
Papua New Guinea	19,868.6	157	n.a.	n.a.	n.a.
Azerbaijan	29,243.4	47	27,950.8	7,648.1	20,302.6
Pakistan	65,752.5	31	62,359.0	18,818.0	43,541.0
New Zealand	71,215.0	44	66,987.8	69,021.2	-2,033.4
Kazakhstan	79,876.0	45	71,111.0	81,093.6	-9,982.6
Taiwan	82,545.3	18	n.a.	n.a.	n.a.
Philippines	88,085.1	41	84,763.1	21,321.7	63,441.4
Thailand	90,719.0	26	85,145.0	139,175.9	-54,031.0
Malaysia	111,789.9	40	96,335.1	101,629.6	-5,294.5
South Korea	140,399.3	13	130,251.1	134,160.2	-3,909.1
Hong Kong	180,433.6	74	165,448.7	985,416.0	-819,967.4

(continued on next page)

Table 1a Cumulative Asian inward transactional FDI and IMF CDIS stock (millions of US dollars)
(continued)

ADB regional member	Inward transactional FDI		Comparison with IMF CDIS end-2010 FDI stock data		
	End-2011 cumulative transactional FDI	Percent of 2011 country GDP	End-2010 cumulative transactional FDI	End-2010 IMF CDIS FDI stocks	Difference between transactional FDI and CDIS FDI values
Japan	192,335.9	3	174,767.2	214,879.7	-40,112.5
Indonesia	198,115.4	23	170,042.8	154,157.9	15,884.9
Singapore	201,971.6	78	175,021.0	461,416.8	-286,395.8
Vietnam	244,105.3	199	n.a.	n.a.	n.a.
India	528,244.4	32	461,603.6	213,588.0	248,015.6
Australia	563,194.8	38	498,752.8	481,393.9	17,359.0
China	1,107,208.7	15	983,139.5	1,569,605.6	-586,466.2
Total	4,137,158.3	19 ^a	3,289,161.9	4,673,616.6	-1,384,454.7

n.a. = not available

a. Includes only available country GDP.

Sources: IMF (2012b); IMF Coordinated Direct Investment Survey (CDIS) Database; author's calculations.

Table 1b Cumulative Asian outward transactional FDI and IMF CDIS stock (millions of US dollars)

ADB regional member	Outward transactional FDI		Comparison with IMF CDIS end-2010 FDI stock data		
	End-2011 cumulative transactional FDI value	Percent of 2011 country GDP	End-2010 cumulative transactional FDI value	End-2010 IMF CDIS FDI stocks	Difference between transactional FDI and CDIS FDI values
Bhutan	0.0	0	n.a.	n.a.	n.a.
Maldives	0.0	0	n.a.	n.a.	n.a.
Turkmenistan	0.0	0	n.a.	n.a.	n.a.
Uzbekistan	0.2	0	n.a.	n.a.	n.a.
Marshall Islands	0.3	n.a.	n.a.	n.a.	n.a.
Solomon Islands	6.4	1	n.a.	n.a.	n.a.
Vanuatu	9.1	n.a.	n.a.	n.a.	n.a.
Micronesia	13.4	n.a.	n.a.	n.a.	n.a.
Fiji	33.1	1	n.a.	n.a.	n.a.
Nepal	40.5	0	n.a.	n.a.	n.a.
Cook Islands	50.2	n.a.	n.a.	n.a.	n.a.
Myanmar	103.7	0	n.a.	n.a.	n.a.
Tajikistan	110.7	2	n.a.	n.a.	n.a.
Afghanistan	155.9	1	n.a.	n.a.	n.a.
Laos	182.6	2	n.a.	n.a.	n.a.
Cambodia	211.5	2	n.a.	n.a.	n.a.
Armenia	220.8	2	137.8	83.0	54.8
Kyrgyzstan	262.2	4	262.2	1.5	260.7
Mongolia	264.7	3	n.a.	n.a.	n.a.
Bangladesh	570.2	1	461.7	98.3	363.3
Georgia	593.3	4	n.a.	n.a.	n.a.
Brunei	645.4	4	n.a.	n.a.	n.a.
Samoa	666.5	106	n.a.	n.a.	n.a.
Papua New Guinea	1,873.2	15	n.a.	n.a.	n.a.
Pakistan	2,511.7	1	2,284.5	1,346.7	937.9
Sri Lanka	5,634.5	10	n.a.	n.a.	n.a.
Kazakhstan	8,884.9	5	7,871.9	15,682.0	-7,810.1
Azerbaijan	11,187.8	18	10,706.6	5,790.1	4,916.5
Philippines	12,057.5	6	11,307.3	3,491.1	7,816.2
Vietnam	14,159.7	12	n.a.	n.a.	n.a.
Indonesia	26,508.2	3	n.a.	n.a.	n.a.
New Zealand	37,455.1	23	31,422.8	16,861.6	14,561.2
Thailand	44,025.1	13	36,085.1	24,845.3	11,239.8
Taiwan	140,073.9	30	n.a.	n.a.	n.a.
Malaysia	148,766.5	53	141,422.6	96,757.9	44,664.8

(continued on next page)

Table 1b Cumulative Asian outward transactional FDI and IMF CDIS stock (millions of US dollars)
(continued)

ADB regional member	Outward transactional FDI		Comparison with IMF CDIS end-2010 FDI stock data		
	End-2011 cumulative transactional FDI value	Percent of 2011 country GDP	End-2010 cumulative transactional FDI value	End-2010 IMF CDIS FDI stocks	Difference between transactional FDI and CDIS FDI values
Singapore	215,472.9	83	n.a.	n.a.	n.a.
Hong Kong	252,023.2	104	221,537.7	812,955.4	-591,417.8
India	278,230.1	17	235,407.5	49,030.7	186,376.8
South Korea	278,623.2	25	242,763.1	143,157.2	99,605.9
China	384,740.5	5	n.a.	n.a.	n.a.
Australia	469,126.3	32	426,745.1	367,676.0	59,069.1
Japan	932,588.8	16	814,644.2	831,075.7	-16,431.4
Total	3,268,083.6	15 ^a	2,182,798.0	2,368,852.6	-185,792.4

n.a. = not available

a. Includes only available country GDP.

Sources: IMF (2012b); IMF Coordinated Direct Investment Survey (CDIS) Database; author's calculations.

Table 2 Cumulative recorded transactional FDI, by meta sector, 1988–2011
(millions of dollars)

Meta sector	Recorded inward transactional FDI	Recorded outward transactional FDI	Net transactional FDI balance
Raw materials	1,101,109	981,043	120,066
Manufacturing	1,011,598	818,809	192,789
Composite	647,394	406,612	240,782
Services	1,377,058	1,061,619	315,439
Total	4,137,158	3,268,084	869,075

Note: See appendix table A.1 for components of each meta sector.

Source: Author's calculations.

Table 3 Inward transactional FDI, by sector and recipient-country income group, 1988–2011
(millions of dollars)

Sector	Total	Country income groups			
		OECD income level	Upper middle income	Lower middle income	Low income
Financial services	340,169	197,074	90,706	48,766	3,623
Construction and real estate	324,641	89,489	122,291	110,662	2,198
Transportation services	302,103	116,173	120,953	62,179	2,798
Telecommunication services	197,273	107,713	27,162	59,891	2,507
Automotive OEM	164,407	18,902	95,978	48,709	818
Hotels and tourism	143,083	32,638	81,748	28,048	649
Food, tobacco, and related stores	133,134	60,417	38,911	33,253	554
Software and IT services	90,740	35,842	21,242	33,542	113
Consumer products	85,952	35,504	39,908	10,200	340
Warehousing and storage	57,694	9,485	14,659	33,323	227
Business services	51,559	23,680	13,620	14,080	179
Leisure and entertainment	50,809	27,006	16,074	7,650	80
Textiles and related stores	46,295	19,083	14,600	11,752	860
Nonautomotive transportation OEM	20,333	2,966	5,662	11,424	281
Healthcare	16,260	10,641	2,535	2,997	87
Total	2,024,452	786,614	706,048	516,475	15,315
Total as a share of aggregate income group 2011 GDP	9%	8%	9%	10%	7%
Total, excluding financial services	1,684,282	589,540	615,341	467,710	11,692
Total, excluding financial services, as a share of aggregate income group 2011 GDP	7%	6%	8%	9%	5%

OEM = original equipment manufacturers

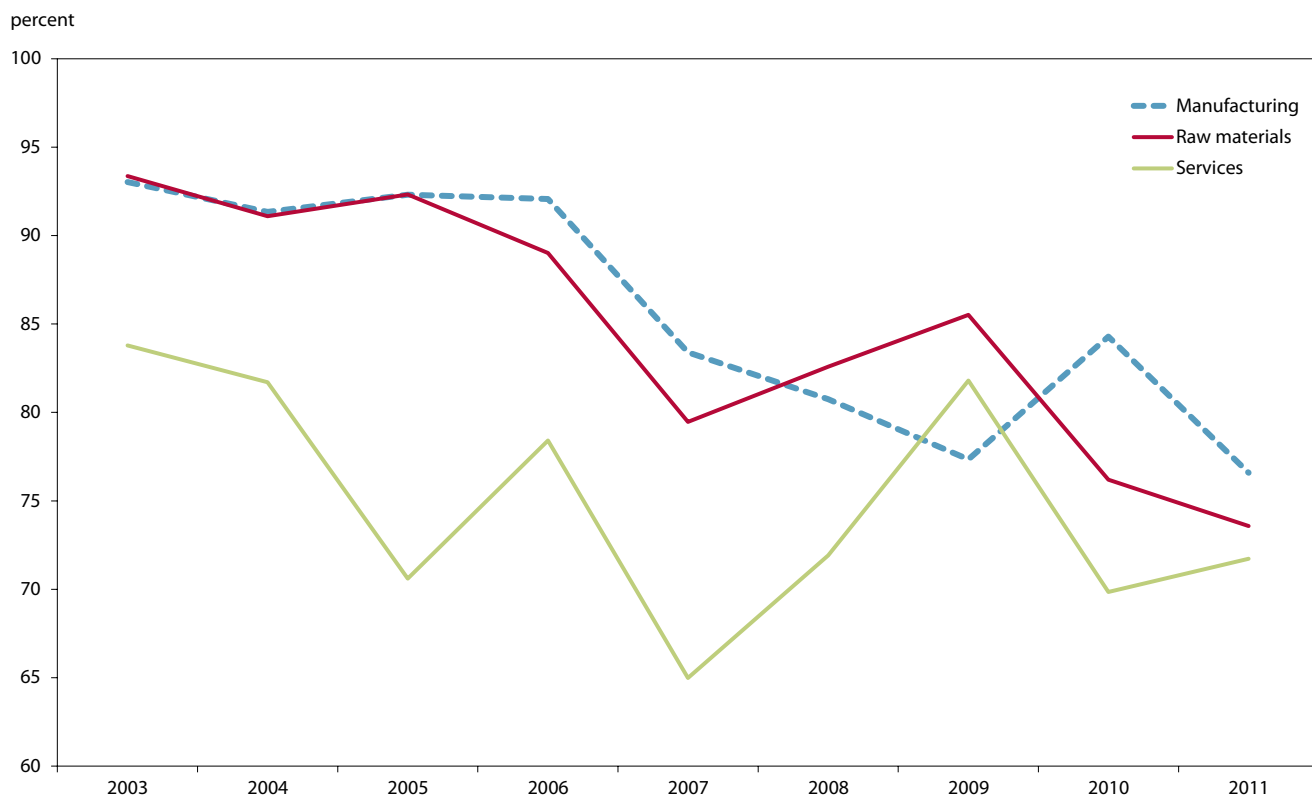
Sources: IMF (2012b); author's calculations.

Table 4 Inward transactional FDI, by source country and recipient-country income groups, 1988–2011 (millions of dollars)

Source countries	Total	Recipient-country income group						Low income	
		OECD level income		Upper middle income		Lower middle income			
OECD	1,406,262	OECD	570,936	OECD	481,809	OECD	346,153	OECD	7,363
Non-OECD	618,190	Non-OECD	215,677	Non-OECD	224,239	Non-OECD	170,322	Non-OECD	7,952
Total	2,024,452	Total	786,614	Total	706,048	Total	516,475	Total	15,315
Intra-ADB	765,108	Intra-ADB	298,432	Intra-ADB	283,093	Intra-ADB	175,274	Intra-ADB	8,309
OECD	551,952	OECD	196,832	OECD	237,115	OECD	114,934	OECD	3,070
Upper middle	162,843	Upper middle	85,673	Upper middle	27,997	Upper middle	46,329	Upper middle	2,844
Lower middle	49,541	Lower middle	15,886	Lower middle	17,818	Lower middle	13,456	Lower middle	2,381
Low	772	Low	42	Low	163	Low	555	Low	13
Top-10 source countries									
United States	501,863	United States	247,253	United States	139,378	United States	114,213	Malaysia	1,717
United Kingdom	191,960	United Kingdom	92,482	Hong Kong	81,288	United Kingdom	48,905	India	1,618
Japan	167,408	China	59,898	Japan	69,595	Japan	43,250	South Korea	1,427
Singapore	125,471	Singapore	57,466	Germany	50,252	United Arab Emirates	40,177	United Kingdom	1,261
Hong Kong	120,800	Japan	53,734	United Kingdom	49,312	Germany	33,370	United Arab Emirates	1,025
Germany	102,986	Australia	37,645	Singapore	42,427	Malaysia	29,787	United States	1,018
China	73,984	Hong Kong	27,505	France	35,909	Singapore	25,387	Japan	829
France	73,356	Canada	23,742	Russia	24,221	South Korea	22,617	China	641
Malaysia	71,961	Malaysia	23,512	South Korea	21,444	France	15,053	Vietnam	573
United Arab Emirates	62,270	France	22,278	Malaysia	16,944	Canada	15,035	Russia	572
Memo: EU-27	504,046	Memo: EU-27	178,666	Memo: EU-27	190,606	Memo: EU-27	131,927	Memo: EU-27	2,846

OECD = Organization for Economic Cooperation and Development; ADB = Asian Development Bank
Source: Author's calculations.

Figure 2 Regional ADB member inward transactional FDI, by meta sector and mode of entry (share of greenfield investments), 2003–11



Source: Author's calculations.

Table 5 Inward transactional FDI, by recipient country and mode of entry, 2003–11
(millions of dollars and percent)

Recipient country	Greenfield	M&A	Greenfield share	Recipient country	Greenfield	M&A	Greenfield share
China	542,559	39,291	93%	Maldives	4,310	25	99%
India	213,837	31,782	87%	Turkmenistan	4,049	47	99%
Australia	68,318	103,703	40%	Uzbekistan	3,240	847	79%
Hong Kong	43,282	77,616	36%	Armenia	2,600	983	73%
Japan	44,670	60,643	42%	Laos	2,250	174	93%
Singapore	57,992	43,132	57%	Brunei	1,166	11	99%
Vietnam	92,556	536	99%	Myanmar	1,054	0	100%
Indonesia	38,144	19,561	66%	Afghanistan	900	0	100%
South Korea	26,255	21,613	55%	Kyrgyzstan	592	210	74%
Pakistan	39,487	3,071	93%	Tajikistan	752	17	98%
Philippines	28,950	6,095	83%	Mongolia	723	9	99%
Malaysia	26,803	6,938	79%	Nepal	691	0	100%
Thailand	27,401	6,244	81%	Fiji	505	158	76%
Kazakhstan	22,023	5,222	81%	Samoa	500	0	100%
Taiwan	14,733	11,075	57%	Papua New Guinea	256	215	54%
New Zealand	5,404	19,699	22%	Bhutan	187	0	100%
Azerbaijan	10,120	192	98%	Solomon Islands	110	14	89%
Georgia	7,019	558	93%	Micronesia	66	0	100%
Sri Lanka	7,135	345	95%	Marshall Islands	0	45	0%
Cambodia	5,651	77	99%	Vanuatu	0	4	0%
Bangladesh	4,110	1,231	77%	Total	1,350,401	461,384	75%

M&A = mergers and acquisitions

Source: Author's calculations.

Table 6 Inward transactional FDI, by sector, mode of entry, and recipient-country income group, 2003–11 (millions of dollars and percent)

Sector	Total			OECD level income			Upper middle income		
	Greenfield	M&A	Greenfield share	Greenfield	M&A	Greenfield share	Greenfield	M&A	Greenfield share
Automotive OEM and related services	152,522	6,716	96%	9,495	4,891	66%	94,120	1,437	98%
Business services	29,670	17,165	63%	6,828	12,530	35%	10,495	3,044	78%
Construction and real estate	263,799	50,026	84%	42,318	38,095	53%	110,028	10,854	91%
Consumer products and related retail stores	67,931	14,103	83%	20,626	11,714	64%	37,765	1,519	96%
Financial services	148,349	129,541	53%	41,789	98,962	30%	69,182	16,965	80%
Food, tobacco, and related stores	66,736	44,602	60%	13,758	29,515	32%	31,321	6,223	83%
Healthcare	5,853	10,077	37%	748	9,570	7%	2,193	340	87%
Hotels and tourism	119,997	12,785	90%	13,524	10,835	56%	78,863	1,743	98%
Leisure and entertainment	42,782	5,571	88%	19,925	4,702	81%	15,609	460	97%
Nonautomotive transportation OEM and related services	17,367	2,526	87%	719	2,004	26%	5,129	395	93%
Software and IT services	66,266	16,071	80%	20,839	8,042	72%	17,733	2,627	87%
Telecommunication services and equipment	79,998	85,326	48%	24,036	54,215	31%	19,408	5,603	78%
Textiles and related stores	40,062	4,549	90%	14,517	2,989	83%	13,443	1,088	93%
Transportation services	192,678	61,199	76%	24,480	48,339	34%	113,303	5,577	95%
Warehousing and storage	56,391	1,128	98%	8,217	1,092	88%	14,623	36	100%
Total	1,350,401	461,384	75%	261,820	337,494	44%	633,216	57,912	92%

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Table 6 Inward transactional FDI, by sector, mode of entry, and recipient-country income group, 2003–11 (millions of dollars and percent) (continued)

	Lower middle income			Low income		
	Greenfield	M&A	Greenfield share	Greenfield	M&A	Greenfield share
Automotive OEM and related services	48,090	388	99.2%	818	0	100.0%
Business services	12,168	1,591	88.4%	179	0	100.0%
Construction and real estate	109,255	1,077	99.0%	2,198	0	100.0%
Consumer products and related retail stores	9,200	870	91.4%	340	0	100.0%
Financial services	34,149	13,231	72.1%	3,229	383	89.4%
Food, tobacco, and related stores	21,103	8,864	70.4%	554	1	99.9%
Healthcare	2,825	167	94.4%	87	0	100.0%
Hotels and tourism	26,995	171	99.4%	614	35	94.6%
Leisure and entertainment	7,169	409	94.6%	80	0	100.0%
Nonautomotive transportation OEM and related services	11,239	126	98.9%	281	0	100.0%
Software and IT services	27,580	5,402	83.6%	113	0	100.0%
Telecommunication services and equipment	34,665	24,889	58.2%	1,888	619	75.3%
Textiles and related stores	11,254	459	96.1%	847	13	98.5%
Transportation services	52,599	6,799	88.6%	2,296	485	82.6%
Warehousing and storage	33,323	0	100.0%	227	0	100.0%
Total	441,615	64,444	87.3%	13,750	1,535	90.0%

OEM = original equipment manufacturers

Source: Author's calculations.

Table 7 Inward transactional FDI by mode of entry, recipient-country income groups, and source countries (millions of dollars and percent)

Source countries	Total			OECD income level			Upper middle income				
	Greenfield	M&A	Greenfield share	Source countries	Greenfield	M&A	Greenfield share	Source countries	Greenfield	M&A	Greenfield share
OECD	939,431.5	281,488.7	77%	OECD	218,884.3	207,762.1	51%	OECD	422,219.8	26,121.8	94%
Non-OECD	410,969.7	179,895.3	70%	Non-OECD	42,935.5	129,731.6	25%	Non-OECD	210,996.6	31,790.0	87%
Total	1,350,401.2	461,384.0	75%	Total	261,819.8	337,493.7	44%	Total	633,216.4	57,911.9	92%
Intra-ADB	485,804.9	208,624.5	70%	Intra-ADB	80,483.0	158,105.1	34%	Intra-ADB	244,124.7	32,307.0	88%
OECD	365,624.9	126,969.3	74%	OECD	59,237.1	87,805.7	40%	OECD	202,623.8	28,212.6	88%
Upper middle	79,154.0	73,516.9	52%	Upper middle	13,468.6	63,253.2	18%	Upper middle	23,978.3	3,631.5	87%
Lower middle	40,265.6	8,138.4	83%	Lower middle	7,735.7	7,046.2	52%	Lower middle	17,359.9	462.9	97%
Low	760.4	0	100%	Low	41.5	0	100%	Low	162.8	0	100%
Top-20 source countries											
United States	305,732.9	120,398.2	72%	United States	82,268.2	93,914.0	47%	United States	126,026.8	10,651.7	92%
Japan	142,504.2	21,260.8	87%	Britain	31,806.5	29,730.3	52%	Hong Kong	63,974.4	13,994.0	82%
Britain	100,253.1	57,017.1	64%	China	5,688.8	48,200.8	11%	Japan	66,820.0	1,957.4	97%
Hong Kong	79,776.8	27,186.8	75%	Japan	36,368.6	14,836.1	71%	Germany	49,121.9	794.9	98%
Singapore	54,687.3	47,508.7	54%	Singapore	4,562.9	32,016.8	12%	Britain	43,465.7	3,993.9	92%
Germany	94,210.6	5,972.3	94%	Australia	5,614.6	21,203.2	21%	Singapore	30,148.8	10,692.4	74%
Malaysia	46,740.5	21,261.1	69%	Canada	3,111.2	18,000.3	15%	France	32,558.7	1,638.6	95%
China	18,052.6	49,783.3	27%	Malaysia	7,231.1	13,390.7	35%	Russia	22,566.6	1,654.2	93%
France	58,285.0	7,223.9	89%	Hong Kong	6,743.2	12,214.7	36%	South Korea	20,556.4	621.1	97%
United Arab Emirates	58,264.0	3,572.5	94%	Germany	11,884.5	4,840.4	71%	Malaysia	14,544.0	2,134.5	87%
South Korea	47,613.0	5,420.8	90%	France	11,373.9	5,141.5	69%	Taiwan	16,224.1	128.3	99%
Canada	25,670.6	18,383.3	58%	India	6,538.7	3,427.9	66%	Bahrain	15,018.3	0	100%
Russia	34,216.0	3,543.3	91%	Italy	8,485.8	978.6	90%	United Arab Emirates	14,218.2	443.5	97%
Australia	13,686.0	22,244.1	38%	Netherlands	3,715.9	4,812.0	44%	Switzerland	12,172.8	1,867.9	87%
India	23,276.3	3,960.5	85%	South Korea	3,437.1	4,413.7	44%	Italy	9,721.5	1,723.2	85%
Switzerland	24,484.1	2,559.1	91%	Switzerland	5,845.9	487.4	92%	India	10,305.4	111.8	99%
Taiwan	25,602.6	966.4	96%	United Arab Emirates	3,694.3	2,489.2	60%	Netherlands	9,471.8	573.9	94%
Italy	22,733.9	3,111.2	88%	Sweden	3,372.5	1,945.9	63%	Sweden	9,096.9	260.9	97%
Netherlands	19,429.3	5,869.4	77%	Bermuda	848.5	3,144.8	21%	Canada	7,634.5	284.5	96%
Sweden	15,702.0	2,604.8	86%	New Zealand	1,199.0	2,362.4	34%	Thailand	6,986.2	212.5	97%
Memo: EU-27	360,387.5	88,061.4	80%	Memo: EU-27	79,070.0	51,947.2	60%	Memo: EU-27	175,909.9	9,841.7	95%

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Table 7 Inward transactional FDI by mode of entry, recipient-country income groups, and source countries (millions of dollars and percent) (continued)

Source countries	Lower middle income			Low income			
	Greenfield	M&A	Greenfield share	Greenfield	Greenfield	Greenfield share	
				Source countries			
OECD	292,655.7	47,099.7	86%	OECD	5,671.7	505.0	92%
Non-OECD	148,959.2	17,343.8	90%	Non-OECD	8,078.5	1,029.8	89%
Total	441,614.8	64,443.5	87%	Total	13,750.2	1,534.8	90%
Intra-ADB	153,336.7	17,794.3	90%	Intra-ADB	7,860.6	418.1	95%
OECD	100,724.3	10,930.5	90%	OECD	3,039.8	20.5	99%
Upper middle	38,968.5	6,534.5	86%	Upper Middle	2,738.7	97.6	97%
Lower middle	13,088.7	329.3	98%	Lower Middle	2,081.3	300.0	87%
Low	555.3	0	100%	Low	0.8	0	100%
Top-20 source countries							
United States	96,419.7	15,832.5	86%	Malaysia	1,635.9	72.8	96%
Britain	24,181.6	22,831.4	51%	India	1,317.9	300.0	81%
Japan	38,486.1	4,467.3	90%	South Korea	1,407.0	20.4	99%
United Arab Emirates	39,361.1	604.8	98%	Britain	799.4	461.5	63%
Germany	32,688.5	337.0	99%	United Arab Emirates	990.3	35.0	97%
Malaysia	23,329.5	5,663.1	80%	United States	1,018.3	0	100%
Singapore	19,795.0	4,799.4	80%	Japan	829.5	0	100%
South Korea	22,212.4	365.6	98%	China	641.3	0	100%
Canada	14,887.3	98.5	99%	Vietnam	573.0	0	100%
France	14,236.3	443.8	97%	Russia	405.4	167.0	71%
Russia	9,486.7	1,704.6	85%	Germany	515.8	0	100%
Hong Kong	8,798.9	978.1	90%	Turkey	444.2	0	100%
China	9,405.6	298.0	97%	Saudi Arabia	0	330.1	0%
Taiwan	7,832.4	79.3	99%	Thailand	314.3	4.5	99%
Austria	7,628.5	17.6	100%	Hong Kong	260.3	0	100%
Netherlands	6,130.5	483.6	93%	Sweden	256.8	0	100%
Switzerland	6,386.3	203.8	97%	Taiwan	236.2	0	100%
Thailand	5,220.8	389.4	93%	Qatar	230.2	0	100%
Sri Lanka	5,256.7	6.0	100%	Singapore	180.6	0.1	100%
India	5,114.2	120.7	98%	Cyprus	129.7	40.0	76%
Memo: EU-27	103,223.0	25,811.1	80%	Memo: EU-27	2,184.6	461.5	83%

OECD = Organization for Economic Cooperation and Development; ADB = Asian Development Bank
Source: Author's calculations.

Appendix table A.1 fDi Markets SIC-based sectoral data classification

Investment sector		SIC categories included	Sector includes
Raw materials			
1	Metals	10, 33, 34, 5051, 5052	Aluminium products, copper alloys, gemstones, metal ore mining, etc.
2	Coal, oil, and natural gas	12, 13, 29, , 517, 554	Coal, petroleum and gas products, including retail distribution outlets.
3	Nonfuel and nonmetallic minerals	14	Mining or quarrying, developing mines, or exploring for nonmetallic minerals, except fuels.
4	Noncarbon energy materials	2819, 2869	Silicon, nuclear and other related materials.
5	Building and construction materials	17, 324, 327, 5032, 5033, 5039, 5211	Cement, concrete, bricks, plaster, etc.
6	Wood products	24, 25, 5031	Chipboard, flooring/panels, houses, furniture, pulp mill, etc.
Manufacturing			
7	Ceramics and glass	321, 322, 323, 325, 326, 328, 329	Ceramics, tiles and glass products
8	Chemicals	281, 284, 285, 286, 287, 289, 516, 5198	Agrochemicals, paints, soaps, etc.
9	Automotive components	3714, 501	All automotive components (except auto electronics)
10	Aerospace (aircrafts and parts)	372	Aerospace (except space/defense).
11	Engines and turbines, including wind	351	Industrial and large transportation engines and turbines, including wind turbines.
12	Industrial machinery, equipment, and tools	352, 353, 354, 355, 356, 358, 359, 361, 382, 5063, 5072, 5074, 5075, 5078, 508	Agricultural machinery, boilers, compressors, machine tools, power tools, etc.
13	Medical devices	384, 385, 5047, 5048	Medical and ophthalmic equipment supplies.
14	Space and defense	376, 381	Space/defence and satellite/navigation.
15	Semiconductors	3674, 3675, 3676	Capacitors, chip design, microchip, wafers, etc.
16	Electronic components	362, 364, 3671, 3672, 3677, 3678, 3679, 369, 5065	ATMs, batteries, imaging, home appliances, LCD, wires, etc.
17	Consumer electronics	363, 365, 386, 5043, 5064	Audio/video electronics, cameras, home entertainment etc.
18	Business machines and equipment	357, 5044, 5045, 5046, 5049	Disks/drives, PCs, printers, servers, etc.
19	Paper, printing, and packaging	26, 27, 511	Packaging, labelling, printing, paper bags, etc.
20	Pharmaceuticals	2833, 2834, 2835, 5122, 8734	Cardiovascular, clinical research, generics, infections, nutrition, respiratory etc.
21	Plastics	282	Plastic compounds, film/coatings, containers/packaging etc.
22	Rubber	30	Rubber, resin/synthetic rubber tires, and miscellaneous plastics products.
23	Biotechnology	2836, 8731	Drug discovery, bio-agricultural, bio-engineering, genomics, etc. (except bioinformatics).
24	Beverages	208, 518	All beverage products.

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Appendix table A.1 fDi Markets SIC-based sectoral data classification *(continued)*

Investment sector	SIC categories included	Sector includes	
Composite "vertically integrated" categories			
25	Automotive OEM and related services	3711, 3713, 551, 552, 553, 75	Passenger cars, sports cars, trucks, buses and related dealers.
26	Nonautomotive transportation OEM and related services	3715, 3716, 373, 374, 375, 379, 555, 556, 557, 558, 559	Motorcycles, trains, watercraft and related dealers.
27	Consumer products and related retail stores	387, 391, 393, 394, 395, 396, 399, 502, 509, 5192, 5193, 5199, 523, 525, 526, 527, 53, 563, 569, 57, 59, 76	Accessories, cutlery, do-it-yourself, jewellery, toys, apparel and related stores.
28	Food, tobacco, and related stores	01, 02, 07, 08, 09, 201, 202, 203, 204, 205, 206, 207, 209, 21, 514, 515, 5191, 5194, 54	Agriculture, bread, coffee, fish, meat, tobacco and food stores.
29	Textiles and related stores	22, 23, 31, 513, 561, 562, 564, 565, 566	Leather, furnishings, footwear, artificial/synthetic fibers, etc.
30	Telecommunication services and equipment	366, 48	Telecom services, telecom equipment, radio and TV broadcasting services.
Services			
31	Construction and real estate	15, 16, 65	Real estate and heavy construction contractors and real estate related services.
32	Business services	731, 732, 733, 734, 735, 736, 738, 81, 82, 86, 871, 872, 8732, 8733, 874, 899, 92, 93, 94, 95, 96, 97	Professional services, advertising, business process outsourcing (BPO), consultancy, education, legal, recruitment and providers of outsourced governmental services.
33	Software and IT services	737	Enterprise application software, software infrastructure, information management software, etc.
34	Financial services	60, 61, 62, 63, 64, 67	Brokerage, financing, mortgages, insurance, venture capital (VC), etc.
35	Healthcare	80, 83	Hospitals, dentists, labs, vets, etc.
36	Leisure and entertainment	5192, 58, 72, 78, 79, 84	Amusement parks, casino, personal services, media, museums, restaurants, theaters, etc.
37	Hotels and tourism	70	Hotels, tourism/travel services, etc.
38	Transportation services	40, 41, 43, 44, 45, 46, 47, 49, 4212, 4213, 4215	Air express, freight, port, trainshipment, etc.
39	Warehousing and storage	4214, 422, 423	Logistics/distribution centre, warehouses, etc.

SIC = Standard Industrial Classification

Sources: Author's calculations; fDi Intelligence; SIC Manual, www.osha.gov/pls/imis/sic_manual.html.