

Kirkegaard, Jacob Funk

**Working Paper**

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

ADB Economics Working Paper Series, No. 318

**Provided in Cooperation with:**

Asian Development Bank (ADB), Manila

*Suggested Citation:* Kirkegaard, Jacob Funk (2012) : Transactions: A New Look at Service Sector Foreign Direct Investment in Asia, ADB Economics Working Paper Series, No. 318, Asian Development Bank (ADB), Manila,  
<https://hdl.handle.net/11540/1271>

This Version is available at:

<https://hdl.handle.net/10419/109437>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<http://creativecommons.org/licenses/by/3.0/igo>

## ADB Economics Working Paper Series



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

---

Jacob Funk Kirkegaard  
No. 318 | November 2012

Asian Development Bank



ADB Economics Working Paper Series

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

Jacob Funk Kirkegaard

No. 318 November 2012

Jacob Funk Kirkegaard has been a research fellow at the Peterson Institute for International Economics since 2002 and is also a senior associate at the Rhodium Group, a New York-based research firm.

Asian Development Bank

Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
[www.adb.org](http://www.adb.org)

© 2012 by Asian Development Bank  
November 2012  
ISSN 1655-5252  
Publication Stock No. WPS125111

The views expressed in this paper are those of the author and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

Note: In this publication, “\$” refers to US dollars.

The ADB Economics Working Paper Series is a forum for stimulating discussion and eliciting feedback on ongoing and recently completed research and policy studies undertaken by the Asian Development Bank (ADB) staff, consultants, or resource persons. The series deals with key economic and development problems, particularly those facing the Asia and Pacific region; as well as conceptual, analytical, or methodological issues relating to project/program economic analysis, and statistical data and measurement. The series aims to enhance the knowledge on Asia’s development and policy challenges; strengthen analytical rigor and quality of ADB’s country partnership strategies, and its subregional and country operations; and improve the quality and availability of statistical data and development indicators for monitoring development effectiveness.

The ADB Economics Working Paper Series is a quick-disseminating, informal publication whose titles could subsequently be revised for publication as articles in professional journals or chapters in books. The series is maintained by the Economics and Research Department.

## CONTENTS

ABSTRACT	v
I. INTRODUCTION	1
II. A NEW DATA SOURCE FOR INVESTIGATING ASIAN SERVICE SECTOR FDI AND WHY IT IS NEEDED	2
A. “It’s Worse Than You Think”—Traditional Sources of FDI Data in Asia	3
B. A New Source of Sector- and Country-Specific Investment Data for Service Sector Analysis	6
III. TRANSACTIONAL FDI IN ASIA	7
A. Comparing Cumulative Transactional FDI Values with Available BPM5-Compliant FDI Stock Data	7
B. Transactional FDI in Regional ADB Members by Meta Sector	11
C. Inward Transactional Services FDI in Asia in Detail	11
IV. CONCLUDING REMARKS AND POLICY IMPLICATIONS	20
APPENDIX TABLE	22
REFERENCES	23



## **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 service sector cross-border investment flows among the Asian Development Bank (ADB) regional members. 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 members. The service sectors are found to receive considerably larger amounts of foreign investment, when compared with the Asian region's manufacturing and raw materials sectors. Organisation for Economic Co-operation and Development (OECD) countries account for roughly three-quarters of total recorded inward service 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" service 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 service sector liberalization, threshold income levels for inward service sector FDI, upward-flowing regional services FDI, and preferred modes of service sector investments.

**Keywords:** Service sector FDI, East Asia, greenfield, M&A, upward-flowing FDI

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





*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 service sectors is greater than ever. Without competitive and innovative service sectors, Asia 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 service sectors. Relying on imitation rather than invention to generate sustainable service sector growth will not suffice to power the Asia's continued economic convergence to fully developed economy status. Without vibrant service 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 service sectors continue to be a relative terra incognita—especially in non-Organisation for Economic Co-operation and Development (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 service sector trade and investment are conceptually acknowledged and have been empirically established,<sup>1</sup> little scholarly consensus, for instance, exists on the actual impact of the many global regional and bilateral service sector initiatives to date.<sup>2</sup>

This paper aims to help begin to address this lack of understanding of the service sectors in Asia and especially their potential impact on regional service sector job creation. Section II presents an innovative new micro-transactions based data source for the detailed analysis of service 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

---

<sup>1</sup> See Hoekman (2006) and Hoekman and Mattoo (2008).

<sup>2</sup> 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 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).

International Monetary Fund (IMF) BPM5-compliant FDI data, to: (i) geographically map the origins of inward transactional FDI into Asia by detailed service sector; (ii) establish the relative importance of intra-Asian service sector FDI flows; (iii) investigate the variation in service sector investment inflows to Asian countries at different levels of economic development; and (iv) explore the relative importance of modes of entry for inward transactional FDI in the service 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 SERVICE SECTOR FDI AND WHY IT IS NEEDED**

Service sector analysis is a relatively recent discipline. Academic research on trade and investments in the service 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 service 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 service sectors were included for the first time.<sup>3</sup> 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 service sectors, too.<sup>4</sup>

By far the most important reason for the lack of timely, theoretically sound, and comprehensive analysis of trends and phenomena in the service 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, and multiple modes of delivery to the consumer,<sup>5</sup> which makes them difficult and very costly to measure consistently, comprehensively, and validly. Even in the United States (US), which has the most wide-ranging service sector data collection efforts in the world, a long list of academic and government reports have highlighted critical data availability deficiencies.<sup>6</sup>

Correspondingly, there is a distinct risk that the general dearth and the resulting skewed global availability of service 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 service sector

<sup>3</sup> See Feketekuty (1988), Sapir and Winter (1994), Findlay and Warren (2000), Adlung et al. (2002), Hoekman (2006), and Copeland and Mattoo (2008).

<sup>4</sup> See, for instance, Hindley and Smith (1984) and Deardorff (1982).

<sup>5</sup> 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.

<sup>6</sup> See, for instance, Feenstra et al. (2010), Houseman (2008), National Academy of Public Administration (2006a, 2006b, 2007a, 2007b), National Research Council (2006), Sturgeon (2006), GAO (2004, 2005), and Office of Senator Joseph Lieberman (2004).

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 service sectors.

### A. “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 Fifth Revision (BPM5)<sup>7</sup> by national statistical agencies and then passed on for agglomeration and publication by international organizations like the IMF itself and the United Nations Conference on Trade and Development (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 service 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,<sup>8</sup> while another 18 are members of the IMF General Data Dissemination System, which is a voluntary capacity-building exercise aimed at encouraging member countries to improve data quality.<sup>9</sup> 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 Asia.

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:<sup>10</sup>

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

<sup>7</sup> 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).

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

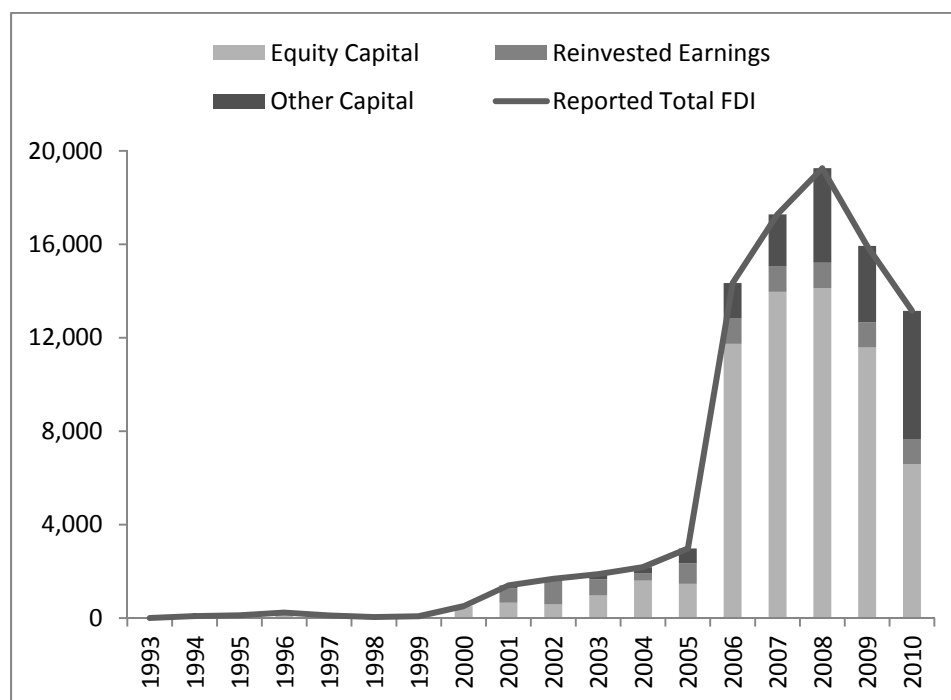
<sup>9</sup> These are Afghanistan; Azerbaijan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; the People’s Republic of China; Fiji; Kiribati; the Maldives; Nepal; Pakistan; Papua New Guinea; Solomon Islands; Tajikistan; Tonga; Vanuatu; and Viet Nam. See <http://dsbb.imf.org/Pages/GDDS/CountryList.aspx>

<sup>10</sup> See BPM5 at IMF (2003, 87f).

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% 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 regularly implementing 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.

**Figure 1: Indian Outward FDI 1993–2010, \$mn**



Source: IMF BOP Statistics.

Two relatively clear breaks in the total reported outward Indian FDI flows are visible in Figure 1: the first relatively modest uptick starting in 2000–2001 and then a much larger increase in 2005–2006. 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.<sup>11</sup> Other attempts at interpreting the increased outflows of Indian FDI after 2000 would be erroneous.

<sup>11</sup> 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).

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"<sup>12</sup> 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 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.<sup>13</sup> 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 FDIs 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. Moran (2011, 1ff), in his seminal discussion of the first generation of FDI research, puts the issue bluntly:

<sup>12</sup> 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.

<sup>13</sup> 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).

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 service 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 service sectors.

## **B. A New Source of Sector- and Country-Specific Investment Data for Service Sector Analysis**

The compilation of datasets from new sources,<sup>14</sup> which include the requisite data detail, is a prerequisite for meaningful service 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.

---

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

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 Fourth 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).<sup>15</sup>

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 annual World Investment Reports since 2005.<sup>16</sup> 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

#### A. 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 available<sup>17</sup> 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. The People’s Republic of China (PRC) 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, Hong Kong, China; Indonesia; Japan; Singapore; and Viet Nam at around \$200 billion, and the Republic of Korea and Malaysia with more than \$100 billion in cumulative inflows. As a share of country 2011 GDP, though, the PRC’s inflows amount to merely 15%, noticeably half of India’s 32% and far below Viet Nam’s almost 200% of GDP. Entrepot economies Singapore and Hong Kong, China have a comparable roughly three-quarters of GDP in cumulative inward transactions, above Malaysian and Philippine levels of about 40% of GDP, Indonesia and Thailand at about a quarter, and the Republic of Korea and Japan at a measly 13% and 3%, respectively. Among the smaller economies, Cambodia, Lao People’s Democratic Republic (Lao PDR), and Papua New Guinea all have recorded inward transactions of about 100% or more of GDP as well, while for regional ADB members as a whole, cumulative recorded inward transactions amount to 19% of 2011 GDP.

<sup>15</sup> 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).

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

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

**Table 1.A: Cumulative Asian Inward Transactional FDI and IMF CDIS Stock**

Inward Transactional FDI, \$ millions			Comparison With IMF CDIS End-2010 FDI Stock Data		
ADB Regional Member	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	NA			
Vanuatu	11.3	2			
Marshall Islands	44.5	NA			
Micronesia, Fed. States of	65.9	NA			
Bhutan	309.4	21	223.7	54.9	168.8
Solomon Islands	360.9	43			
Samoa	519.4	82			
Nepal	1,420.3	8	1,288.3	522.3	766.0
Fiji	1,497.0	42			
Maldives	4,335.1	223			
Afghanistan	4,580.3	25			
Tajikistan	5,075.1	78			
Mongolia	5,304.8	62			
Kyrgyz Rep.	6,104.6	103	5,675.5	1,033.8	4,641.7
Myanmar	6,950.9	13			
Armenia	7,693.2	76	6,882.7	4,338.2	2,544.5
Lao PDR	8,294.7	105			
Brunei Darussalam	9,908.3	64			
Bangladesh	10,643.7	9	10,153.6	6,196.3	3,957.3
Sri Lanka	10,895.6	18			
Cambodia	12,157.5	95			
Turkmenistan	12,802.1	50			
Georgia	13,251.0	92	11,259.7	8,145.0	3,114.7
Uzbekistan	19,827.9	44			
Papua New Guinea	19,868.6	157			
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
Taipei, China	82,545.3	18			
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
Korea, Rep. of	140,399.3	13	130,251.1	134,160.2	-3,909.1
Hong Kong, China	180,433.6	74	165,448.7	985,416.0	-819,967.4
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
Viet Nam	244,105.3	199			
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, People's Rep. of	1,107,208.7	15	983,139.5	1,569,605.6	-586,466.2
Total	4,137,158.3	19 (*)	3,289,161.9	4,673,616.6	-1,384,454.7

CDIS = Coordinated Direct Investment Survey, FDI = foreign direct investment, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, NA = data not available.

\* Includes only available country GDP.

Sources: IMF WEO April 2012; IMF CDIS; Author's calculations.



**Table 1.B: Cumulative Asian Outward Transactional FDI and IMF CDIS Stock**

ADB Regional Member	Outward Transactional FDI, \$ million		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			
Maldives	0.0	0			
Turkmenistan	0.0	0			
Uzbekistan	0.2	0			
Marshall Islands	0.3	NA			
Solomon Islands	6.4	1			
Vanuatu	9.1	NA			
Micronesia, Fed. States of	13.4	NA			
Fiji	33.1	1			
Nepal	40.5	0			
Cook Islands	50.2	NA			
Myanmar	103.7	0			
Tajikistan	110.7	2			
Afghanistan	155.9	1			
Lao PDR	182.6	2			
Cambodia	211.5	2			
Armenia	220.8	2	137.8	83.0	54.8
Kyrgyz Rep.	262.2	4	262.2	1.5	260.7
Mongolia	264.7	3			
Bangladesh	570.2	1	461.7	98.3	363.3
Georgia	593.3	4			
Brunei Darussalam	645.4	4			
Samoa	666.5	106			0.0
Papua New Guinea	1,873.2	15			
Pakistan	2,511.7	1	2,284.5	1,346.7	937.9
Sri Lanka	5,634.5	10			
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
Viet Nam	14,159.7	12			
Indonesia	26,508.2	3			
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
Taipei, China	140,073.9	30			
Malaysia	148,766.5	53	141,422.6	96,757.9	44,664.8
Singapore	215,472.9	83			
Hong Kong, China	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
Korea, Rep. of	278,623.2	25	242,763.1	143,157.2	99,605.9
China, People's Rep. of	384,740.5	5			
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 (*)	2,182,798.0	2,368,852.6	-185,792.4

CDIS = Coordinated Direct Investment Survey, FDI = foreign direct investment, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, NA = data not available.

\* Includes only available country GDP.

Sources: IMF WEO April 2012; IMF CDIS; Author's calculations.

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 \$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 the PRC and Hong Kong, 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% of Hong Kong, China's end-2010 inward FDI stocks originate in just two destinations, the PRC and the British Virgin Islands, while about 60% of the PRC's end-2010 inward FDI stocks originate in the British Virgin Islands and Hong Kong, China. 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,<sup>18</sup> cumulative transactional FDI data values seem the superior data sources for the two countries in question.

Beyond the large revealed discrepancies for the PRC and India, Table 1A shows considerably higher transactional FDI values when compared with CDIS FDI stocks in India, Pakistan and the Philippines, while values are noticeably lower for Japan, Singapore, 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 nine countries with 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% of regional GDP. Japan is by far the region's largest outward investor with almost \$1 trillion in recorded transactions, followed by Australia; the PRC; Hong Kong, China; India; the Republic of Korea; Malaysia; Singapore; and Taipei, China, all with more than \$100 billion in cumulative outward transactions. As a share of GDP, Japan's 16% and India's 17% are roughly on par with the regional average, while Australia; the Republic of Korea; Malaysia; Taipei, China; and the two entrepot economies are more intensive outward investors. The PRC meanwhile at just 5% 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, by far the largest discrepancy is once more found in Hong Kong, China 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% of Hong Kong, China's IMF outward CDIS FDI stocks are found in the British Virgin Islands and the PRC suggests that the issues of ultimate ownership basis are to blame for a second time.

Apart from Hong Kong, China, Table 1B reveals significantly higher recorded cumulative outward transactions in Australia, India, the Republic of Korea, and Malaysia. Higher cumulative

---

<sup>18</sup> 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.

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.

## B. Transactional FDI in Regional ADB Members by Meta Sector

Before drilling into the finer details of service 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: Cumulative Recorded Transactional FDI 1988–2011, By Meta Sector, \$ million**

Meta Sector	Recorded Inward Transactional FDI 1988–2011	Recorded Outward Transactional FDI 1988–2011	Net Transactional FDI Balance FDI 1988–2011
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

FDI = foreign direct investment.

Source: Author's estimates.

Table 2 shows for both inward and outward transactional FDI that the service 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 service 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 service sectors, to ensure that service sector transactions are as comprehensively covered as possible, the composite sector will for the remainder of this paper be merged with the service sector.

## C. 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:<sup>19</sup> OECD-level-income countries,

<sup>19</sup> Available at [http://databank.worldbank.org/ddp/viewClassifications?HIERARCHY=Classification&DIMENSION=WDI\\_Ctry](http://databank.worldbank.org/ddp/viewClassifications?HIERARCHY=Classification&DIMENSION=WDI_Ctry).

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 economies (\$12,276 or more)*: Australia; Brunei Darussalam; Hong Kong, China; Japan; the Republic of Korea, New Zealand; Singapore; and Taipei, China.
- *Upper-middle-income countries (\$3,976 to \$12,275)*: Azerbaijan, the PRC, Cook Islands, Kazakhstan, Malaysia, the Maldives, and Thailand.
- *Lower-middle-income countries (\$1,006 to \$3,975)*: Armenia, Bhutan, Fiji, Georgia, India, Indonesia, Lao PDR, the Marshall Islands, the Federated States of Micronesia, Mongolia, Pakistan, the Philippines, Papua New Guinea, Samoa, Solomon Islands, Sri Lanka, Turkmenistan, Uzbekistan, Vanuatu, and Viet Nam.
- *Low-income countries (\$1,005 or less)*: Afghanistan, Bangladesh, Cambodia, the Kyrgyz Republic, 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.

### 1. Inward Transactional FDI by Detailed Service Sector

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

**Table 3: Inward Transactional FDI By Sector and Country Income Group, 1988–2011**

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
Telecommunications Services, etc.	197,273	107,713	27,162	59,891	2,507
Automotive OEM, etc.	164,407	18,902	95,978	48,709	818
Hotels and Tourism	143,083	32,638	81,748	28,048	650
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 etc.	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
Non-Automotive Transport OEM, etc.	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

FDI = foreign direct investment, GDP = gross domestic product, IT = information technology, OEM = original equipment manufacture.

Sources: IMF WEO April 2012; Author's estimates.

Transactional service 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 service sectors account for roughly \$1 trillion in cumulative inflows, or about half of the recorded total.<sup>20</sup> Significant cumulative inward investments of between \$100 billion and \$200 billion are found in the automotive, original equipment manufacture (OEM) and related services, food and tobacco, hotels and tourism, and telecommunications and equipment service sectors. Software and IT services and consumer products and related retail each amount to between \$80 billion–\$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' service 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 make it clear that, while low-income countries may be too poor to attract numerically large service sector investment inflows, significant potential exists in still relatively poor economies. Indeed, lower-middle-income countries at 10% of 2011 GDP have the highest inward services investment share. In other words, service sector FDI is not an economic activity reserved for developed economies. The fact that upper-middle-income country aggregate service 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 service sector investors.

Excluding the financial service sector does not materially change this situation, as Table 3 shows how nonfinancial inward investments remain evenly distributed across country income groups, and lower-middle-income countries at 9% 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.

## **2. 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.

<sup>20</sup> 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.

**Table 4: Inward Transactional FDI, Source Country and Income Groups, 1988–2011 (\$ million)**

Total		Country Income Groups							
		OECD Level Income		Upper Middle Income		Lower Middle Income		Low 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 Economies		Top-10 Source Economies		Top-10 Source Economies		Top-10 Source Economies		Top-10 Source Economies	
United States	501,863	United States	247,253	United States	139,378	United States	114,213	Malaysia	1,717
Britain	191,960	Britain	92,482	Hong Kong, China	81,288	Britain	48,905	India	1,618
Japan	167,408	China, People's Rep. of	59,898	Japan	69,595	Japan	43,250	Korea, Rep. of	1,427
Singapore	125,471	Singapore	57,466	Germany	50,252	United Arab Emirates	40,177	Britain	1,261
Hong Kong, China	120,800	Japan	53,734	Britain	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, People's Rep. of	73,984	Hong Kong, China	27,505	France	35,909	Singapore	25,387	Japan	829
France	73,356	Canada	23,742	Russian Federation	24,221	Korea, Rep. of	22,617	China, People's Rep. of	641
Malaysia	71,961	Malaysia	23,512	Korea, Rep. of	21,444	France	15,053	Viet Nam	573
United Arab Emirates	62,270	France	22,278	Malaysia	16,944	Canada	15,035	Russian Federation	572
EU-27	504,046	EU-27	178,666	EU-27	190,606	EU-27	131,927	EU-27	2,846

EU-27 = 27 member states of the European Union, FDI = foreign direct investment, OECD = Organisation for Economic Co-operation and Development.

Source: Author's estimates.

Table 4 shows how roughly three-quarters of total inward service sector transactional FDI into the region comes from OECD countries. Regional OECD-income-level countries, the US, 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 service sector investors at just \$772 million in recorded transactions. Apart from the OECD countries, the largest service sector investors in the region are mostly regional in the PRC; Hong Kong, China, and Singapore, 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% is from OECD sources, while just under 40% is intra-ADB investments mostly from one OECD-level country to another. On the other hand it is noteworthy how the PRC is the third largest individual investor in regional OECD-level-income economies (mostly accounted for by investments in Hong Kong, China),<sup>21</sup> while Malaysia also has sizeable service sector investments “flowing upwards” to OECD-level-income countries (mostly into Singapore).<sup>22</sup> 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 service 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 Viet Nam among the top-10 individual investors into the service sectors in the least developed economies in the region.

### **3. Inward Transactional FDI by Sector, Mode of Entry, and Country Income Group**

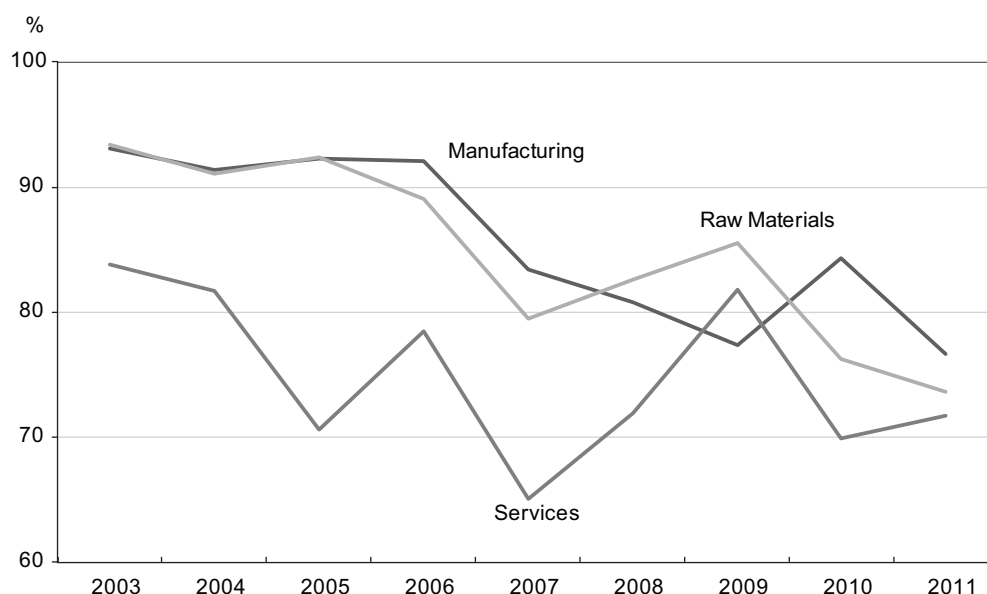
By making available a data breakdown by mode of entry of investment into greenfield and M&A type investments, the transactional FDI dataset provides a novel empirical basis for the analysis of management strategies and the host-country impact of inward FDI, a key area of interest for regional policymakers.

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% until the mid-2000s, relative to the service sectors. At the same time, it is visible how M&A 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% of total inward transactional FDI into the Asian region.

<sup>21</sup> More than \$50 billion of recorded PRC investments have gone into Hong Kong, China.

<sup>22</sup> About \$17 billion of recorded Malaysian investments have gone into Singapore.

**Figure 2: Regional ADB Member Inward Transactional FDI, by Meta Sector and Mode of Entry, Share of Greenfield Investment, 2003–2011**



Source: Author's estimates.

Table 5 breaks down the relative importance of greenfield and M&A transactions in inward transactional service 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 Darussalam) in the region and the rest. Whereas the weight of greenfield transactions ranges between roughly 40% and 60%, e.g., about half in Australia; Hong Kong, China; Japan; the Republic of Korea; New Zealand; Singapore; and Taipei, China (lowest at just 22%), it is around 90% for the PRC, India, Pakistan, Viet Nam, and essentially all the smaller regional ADB members. Countries like the Indonesia, Kazakhstan, Malaysia, the Philippines, and Thailand have marginally lower weights of greenfield investments at around 80% of total inflows.

Table 6 goes further and breaks down regional inward transactional FDI into detailed service 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 shows again how greenfield investments, overall are by far the most important mode of entry for service sector FDI, accounting for 75% of total inflows. There are, however, sizable differences between individual service sectors with just over a third of total investments in the small healthcare sector of a greenfield nature, and in the big financial service sector just over half of inward investments are so. Meanwhile, inward investments in other service sectors are almost wholly greenfield, with more than 90% 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.



**Table 5: Inward Transactional FDI by Destination and Mode of Entry, 2003–2011, \$ million**

Destination	Greenfield	M&A	Greenfield Share	Destination	Greenfield	M&A	Greenfield Share
China, People's Rep. of	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, China	43,282	77,616	36%	Armenia	2,600	983	73%
Japan	44,670	60,643	42%	Lao PDR	2,250	174	93%
Singapore	57,992	43,132	57%	Brunei Darussalam	1,166	11	99%
Viet Nam	92,556	536	99%	Myanmar	1,054		100%
Indonesia	38,144	19,561	66%	Afghanistan	900		100%
Korea, Rep. of	26,255	21,613	55%	Kyrgyz Republic	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		100%
Thailand	27,401	6,244	81%	Fiji	505	158	76%
Kazakhstan	22,023	5,222	81%	Samoa	500		100%
Taipei, China	14,733	11,075	57%	PNG	256	215	54%
New Zealand	5,404	19,699	22%	Bhutan	187		100%
Azerbaijan	10,120	192	98%	Solomon Islands	110	14	89%
Georgia	7,019	558	93%	Micronesia	66		100%
Sri Lanka	7,135	345	95%	Marshall Islands		45	0%
Cambodia	5,652	77	99%	Vanuatu		4	0%
Bangladesh	4,110	1,231	77%	<b>Total</b>	<b>1,350,401</b>	<b>461,384</b>	<b>75%</b>

FDI = foreign direct investment, Lao PDR = Lao People's Democratic Republic, M&A = mergers and acquisitions, PNG = Papua New Guinea.

Source: Author's estimates.

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 service 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 service sectors.

**Table 6: Inward Transactional FDI, By Sector and Mode of Entry, 2003–2011, \$ millions**

Total				OECD Level Income			Upper Middle Income		
Sector	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%
Non-Automotive Transport 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%
Telecommunications 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%
Lower Middle Income				Low Income					
Sector	Greenfield	M&A	Greenfield Share	Greenfield	M&A	Greenfield Share			
Automotive OEM and Related Services	48,090	388	99.2%	818		100.0%			
Business Services	12,168	1,591	88.4%	179		100.0%			
Construction and Real Estate	109,255	1,077	99.0%	2,198		100.0%			
Consumer Products and Related Retail Stores	9,200	870	91.4%	340		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		100.0%			
Hotels and Tourism	26,995	171	99.4%	615	35	94.6%			
Leisure and Entertainment	7,169	409	94.6%	80		100.0%			
Non-Automotive Transport OEM and Related Services	11,239	126	98.9%	281		100.0%			
Software and IT services	27,580	5,402	83.6%	113		100.0%			
Telecommunications 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		100.0%			
Total	441,615	64,444	87.3%	13,750	1,535	90.0%			

FDI = foreign direct investment, OECD = Organisation for Economic Co-operation and Development, OEM = original equipment manufacture.

Source:

It is less obvious that privatization proceeds have been a major source of government revenue or inward M&A transactions among the ADB regional members. The World Bank/IFC Privatization Database,<sup>23</sup> which includes over 10,000 individual government divestments between 1988 and 2008, shows that only about one-third 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, the PRC alone accounted for almost \$200 billion, meaning that the ADB regional membership ex-the PRC has accounted for just over \$80 billion, or 10% 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.

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

#### 4. 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: Inward Transactional FDI by Mode of Entry, Income Groups and Source Countries**

Total				OECD Income Level				Upper Middle Income			
Source Economies	Greenfield	M&A	Greenfield Share	Source Economies	Greenfield	M&A	Greenfield Share	Source Economies	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	-	100%	Low	41.5	-	100%	Low	162.8	-	100%
Top-20 Source Economies				Top-20 Source Economies				Top-20 Source Economies			
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, China	63,974.4	13,994.0	82%
Britain	100,253.1	57,017.1	64%	China, People's Rep.	5,688.8	48,200.8	11%	Japan	66,820.0	1,957.4	97%
Hong Kong, China	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, People's Rep. of	18,052.6	49,783.3	27%	Malaysia	7,231.1	13,390.7	35%	Russian Federation	22,566.6	1,654.2	93%
France	58,285.0	7,223.9	89%	Hong Kong, China	6,743.2	12,214.7	36%	Korea, Rep. of	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%
Korea, Rep. of	47,613.0	5,420.8	90%	France	11,373.9	5,141.5	69%	Taipei, China	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	-	100%
Russian Federation	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, The	3,715.9	4,812.0	44%	Switzerland	12,172.8	1,867.9	87%
India	23,276.3	3,960.5	85%	Korea, Rep. of	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%
Taipei, China	25,602.6	966.4	96%	United Arab Emirates	3,694.3	2,489.2	60%	Netherlands, The	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%
EU-27	360,387.5	88,061.4	80%	EU-27	79,070.0	51,947.2	60%	EU-27	175,909.9	9,841.7	95%
Lower Middle Income				Low Income							
Source Economies	Greenfield	M&A	Greenfield Share	Source Economies	Greenfield	M&A	Greenfield Share				
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	-	100%	Low	0.8	-	100%				
Top-20 Source Economies				Top-20 Source Economies							
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%	Korea, Rep. of	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	-	100%				
Singapore	19,795.0	4,799.4	80%	Japan	829.5	-	100%				
Korea, Rep. of	22,212.4	365.6	98%	China, People's Rep.	641.3	-	100%				
Canada	14,887.3	98.5	99%	Viet Nam	573.0	-	100%				
France	14,236.3	443.8	97%	Russian Federation	405.4	167.0	71%				
Russian Federation	9,486.7	1,704.6	85%	Germany	515.8	-	100%				
Hong Kong, China	8,798.9	978.1	90%	Turkey	444.2	-	100%				
China, People's Rep. of	9,405.6	298.0	97%	Saudi Arabia	-	330.1	0%				
Taipei, China	7,832.4	79.3	99%	Thailand	314.3	4.5	99%				
Austria	7,628.5	17.6	100%	Hong Kong, China	260.3	-	100%				
Netherlands, The	6,130.5	483.6	93%	Sweden	256.8	-	100%				
Switzerland	6,386.3	203.8	97%	Taipei, China	236.2	-	100%				
Thailand	5,220.8	389.4	93%	Qatar	230.2	-	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%				
EU-27	103,223.0	25,811.1	80%	EU-27	2,184.6	461.5	83%				

EU-27 = 27 member states of the European Union, FDI = foreign direct investment, OECD = Organisation for Economic Co-operation and Development.

Source: Author's estimates.

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% 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%. Looking at the individual source countries, it becomes clear that the majority of these upper-middle-income-country service sector “upward investment flows” comes from the PRC and Malaysia and go into Hong Kong, China 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% 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 service sector trends and developments. Without such new detailed data, the material for service 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 M&As as a source for detailed analysis of service sector cross-border investment flows among the ADB regional members 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 members. The service sectors are found to receive considerably larger amounts of foreign investment, when compared with the Asia’s manufacturing and raw materials meta sectors, while substantial divergence is found among the ADB regional members 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 service sectors for inward transactional FDI are financial services, construction and real estate, and transportation service 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, service 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 service sector investments in Asia are overwhelmingly entering only the most developed economies.

OECD countries account for roughly three-quarters of total recorded inward service sector FDI of about \$2 trillion, relatively evenly split between the US, the EU-27, and regional OECD-level-income countries. Total intra-ADB investment flows account for just over one-third (37%, 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” service sector investments into OECD-level-income economies is verified, especially from the PRC and Malaysia into Hong Kong, China and Singapore, respectively. The region’s middle-income countries are, moreover, sizable investors into the service sectors of poorest nations among the ADB regional members.

Greenfield transactions are found to be by far the most important mode of investments into the region’s service sectors, accounting for fully 75% of all inward investments. However, among the region’s most developed economies, M&A transactions account for the majority of total service 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 service sectors are found to occur mostly in the form of M&A, especially originating in the PRC, 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 Asia’s service 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 service 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 service sector investment flows exist, the source countries of such flows—noticeably the PRC, Malaysia, and India—have seemingly relatively little to fear from more competition in their domestic service 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 service sector FDI is greenfield investments, it is not obvious why more foreign investment into the region’s service sectors will not have a significant positive impact on regional job creation. At least, as the relative weight of greenfield investments at roughly 75% 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 service sectors will be noticeably worse than in other sectors.

**Appendix Table: FDI Markets SIC-Based Sectoral Data Classification**

Investment Sector		SIC Categories Included	Sector Includes	
1	Metals	10, 33, 34, 5051, 5052	Aluminium products, copper alloys, gemstones, metal ore mining etc.	Raw Materials Categories
2	Coal, Oil, and Natural Gas	12, 13, 29, 517, 554	Coal, petroleum, and gas products, including retail distribution outlets	
3	Non-Fuel and Nonmetallic Minerals	14	Mining or quarrying, developing mines, or exploring for nonmetallic minerals, except fuels	
4	Non-Carbon 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.	
7	Ceramics and Glass	321, 322, 323, 325, 326, 328, 329	Ceramics, tiles, and glass products	Manufacturing Categories
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/defence)	
11	Engines and Turbines, incl. 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 Defence	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, PC's, 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	
25	Automotive OEM and Related Services	3711, 3713, 551, 552, 553, 75	Passenger cars, sports cars, trucks, buses, and related dealers	Composite "Vertically Integrated" Categories
26	Non-Automotive Transport 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, DIY, 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 fibres, etc.	
30	Telecommunications Services and Equipment	366, 48	Telecom services, Telecom equipment, radio and TV broadcasting services.	
31	Construction and Real Estate	15, 16, 65	Real estate and heavy construction contractors and real estate related services	Services Categories
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, 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, 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, theatres 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 & Storage	4214, 422, 423	Logistics/distribution centre, warehouse, etc.	

DIY = do-it-yourself, FDI = foreign direct investment, OEM = original equipment manufacture, SIC = Standard Industrial Classification.

Sources: Author's compilation. FDintelligence. SIC Manual (OSHA Online Version: [http://www.osha.gov/pls/imis/sic\\_manual.html](http://www.osha.gov/pls/imis/sic_manual.html))

## REFERENCES

- Adlung, Rudolf, Antonia Carzeniga, Bernard Hoekman, Maramichi Kono, Aaditya Mattoo, and Lee Tuthill. 2002. The GATS: Key Features and Sectors. *Development, Trade, and the WTO*. In Bernard Hoekman, Aaditya Mattoo, and Philip English, eds. Washington, DC: World Bank.
- Copeland, Brian, and Aaditya Mattoo. 2008. *The Basic Economics of Services Trade. A Handbook on International Trade in Services*. In Aaditya Mattoo, Robert M. Stern, and Gianni Zanini, eds. Oxford University Press.
- Deardorff, Alan V. 1982. The General Validity of the Heckscher-Ohlin Theorem. *American Economic Review* 72, no. 4 (September): 683–94.
- Dee, Philippa. 2005. East Asian Economic Integration and its Impact on Future Growth. *Asia Pacific Economic Paper* 350. Australia–Japan Research Centre, Crawford School, Australian National University.
- Desai, Mihir A., and James R. Hines, Jr. 2001. Foreign Direct Investment in a World of Multiple Taxes. *NBER Working Paper* 8440. Cambridge, MA: National Bureau of Economic Research.
- Desai, Mihir A., C. Fritz Foley, and James R. Hines, Jr. 2005a. Do Tax Havens Divert Economic Activity? *Ross School of Business Working Paper Series* 1024 (April).
- \_\_\_\_\_. 2005b. The Demand for Tax Haven Operations. Photocopy.
- \_\_\_\_\_. 2006. Taxation and Multinational Activity: New Evidence, New Interpretations. *Survey of Current Business* (February). Washington, DC: US Bureau of Economic Analysis.
- \_\_\_\_\_. 2007. Repatriation Taxes and Dividend Distortions. *National Tax Journal* LIV, no. 4: 829–51.
- Feenstra, Robert C., R. E. Lipsey, L. G. Branstetter, C. F. Foley, J. Harrigan, J. B. Jensen, L. Kletzer, C. Mann, P. K. Schott, and G. C. Wright. 2010. Report on the State of Available Data for the Study of International Trade and Foreign Direct Investment. *NBER Working Paper* 16254. Cambridge, MA: National Bureau of Economic Research.
- Feketekuty, Geza. 1988. *International Trade in Services: An Overview and Blueprint for Negotiations*. Cambridge, MA: Ballinger Publishing.
- Findlay, Christopher, and Tony Warren, eds. 2000. *Impediments to Trade in Services: Measurement and Policy Implications*. New York: Routledge.
- Fink, Carsten, and Martin Molinuevo. 2007. East Asian Free Trade Agreements in Services: Roaring Tigers or Timid Pandas? *World Bank Policy Research Paper*. Washington, DC: World Bank.
- GAO (General Accounting Office). 2004. *Current Government Data Provide Limited Insight into Off-shoring of Services* (September). Washington, DC.

- \_\_\_\_\_. 2005. *Offshoring of Services: Overview of the Issues* (November). Washington, DC.
- Graham, Edward M., and David M. Marchick. 2006. *US National Security and Foreign Direct Investment*. Washington, DC: Peterson Institute for International Economics.
- Görg, Holger. 2000. Analyzing Foreign Market Entry: The Choice between Greenfield Investment and Acquisitions. Technical Paper 98/1. *Trinity Economic Papers Series*. Dublin: Trinity College.
- Hindley, B., and A. Smith. 1984. Comparative Advantage and Trade in Services. *World Economy* 7: 369–90.
- Hoekman, Bernard. 2006. Liberalizing Trade in Services: A Survey. *World Bank Policy Research Working Paper* 4030. Washington, DC: World Bank.
- Hoekman Bernard, and Pierre Sauvé. 1994. Regional and Multilateral Liberalization of Service Markets: Complements or Substitutes? *Journal of Common Market Studies* 32, No. 3: 283–318.
- Hoekman, Bernard, and Aaditya Mattoo. 2008. Services Trade and Growth. *World Bank Policy Research Working Paper* 4461. Washington: World Bank.
- Houseman, Susan. 2008. *Outsourcing and Offshoring: Problems for Price and Productivity Measurement*. Upjohn Institute for Employment Research. Photocopy.
- Hufbauer, Gary C. 1992. *US Taxation of International Income: Blueprint for Reform*. Washington, DC: Institute for International Economics
- Hufbauer, Gary C., and Ariel Assa. 2007. *US Taxation of Foreign Income*. Washington: Peterson Institute for International Economics.
- IMF (International Monetary Fund). 2003. *Fifth Edition of the IMF's Balance of Payments and International Investment Position Manual (BPM5)*. Washington, DC. Available at <http://www.imf.org/external/pubs/ft/bopman/bopman.pdf>
- \_\_\_\_\_. 2011. *Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual*. Washington, DC.  
Available at <http://www.imf.org/external/pubs/ft/bop/2007/bopman6.htm>
- \_\_\_\_\_. 2012a. *Balance of Payments Statistics, March 2012*. CD-ROM. Washington.
- \_\_\_\_\_. 2012b. *World Economic Outlook Database, April 2012*. Washington, DC. Available at <http://www.imf.org/external/pubs/ft/weo/2012/01/weodata/index.aspx>
- Jensen, J. Bradford. 2011. *Global Trade in Services: Fear, Facts, and Offshoring*. Washington, DC: Peterson Institute for International Economics.



- Kirkegaard, Jacob Funk. Forthcoming. New Transactional Micro-Level Data Sources for FDI Analysis. *Working Paper*. Washington, DC: Peterson Institute for International Economics.
- Mattoo, Aaditya, and Pierre Sauvé. 2008. Regionalism in Services Trade, eds. Aaditya Mattoo, Robert M. Stern, and Gianni Zanini. *A Handbook on International Trade in Services* Oxford University Press.
- Mirza, Daniel, and Giuseppe Nicoletti. 2004. *What Is So Special about Trade in Services? University of Nottingham Research Paper 2004/02*. University of Nottingham.
- Moran, Theodore H. 2011. *Foreign Direct Investment and Development: Launching a Second Generation of Policy Research: Avoiding the Mistakes of the First, Reevaluating Policies for Developed and Developing Countries*. Washington, DC: Peterson Institute for International Economics.
- National Academy of Public Administration. 2006a. *Off-shoring: An Elusive Phenomenon*. Washington.
- \_\_\_\_\_. 2006b. *Off-shoring: How Big Is It?* Washington, DC.
- \_\_\_\_\_. 2007a. *Off-shoring: What Are Its Effects?* Washington, DC.
- \_\_\_\_\_. 2007b. *Off-shoring: New Challenges and Opportunities in an Expanding Global Economy*. Washington, DC.
- National Research Council 2006. *Analyzing the US Content of US Imports and the Foreign Content of US Exports*. Washington, DC.
- Nocke, Volker, and Stephen Yeaple. 2004. An Assignment Theory of Foreign Direct Investment. *NBER Working Paper 11003*. Cambridge, MA: National Bureau of Economic Research.
- Norbäck, Pehr-Johan, and Lars Persson. 2002. Cross-Border Acquisitions and Greenfield Entry. *Working Paper 570*. Stockholm, Sweden: Research Institute of Industrial Economics.
- Ochiai Ryo, Philippa Dee, and Christopher Findlay. 2007. Services in Free Trade Agreements. *Discussion Paper 07015*. Research Institute of Economy, Trade, and Industry.
- Organisation for Economic Co-operation and Development (OECD). 2008a. Tax Effects on Foreign Direct Investment: Recent Evidence and Policy Analysis. *OECD Tax Policy Studies 17*. Paris.
- \_\_\_\_\_. 2008b. *OECD Benchmark Definition of Foreign Direct Investment*, 4th edition. Paris.
- Office of Senator Joseph Lieberman. 2004. Data Dearth in Offshore Outsourcing: Policy Making Requires Facts (December). Washington, DC.

Roy, Martin, Juan A. Marchetti, and Aik Hoe Lim. 2006. Services Liberalization in the New Generation of Preferential Trade Agreements (PTAs): How Much Further than the GATS? *WTO Staff Working Paper* ERSD-2006-07. Geneva: World Trade Organization.

Sapir, André, and Chantal Winter. 1994. Service Trade. *ULB Institutional Repository* 2013/8176. Université Libre de Bruxelles.

Sturgeon, Tim. 2006. *Why We Can't Measure the Economic Effects of Services Offshoring: The Data Gaps and How to Fill Them*. Services Offshoring Working Group. Sloan Foundation.

Available at [http://web.mit.edu/ipc/publications/pdf/IPC\\_Offshoring\\_Report.pdf](http://web.mit.edu/ipc/publications/pdf/IPC_Offshoring_Report.pdf)

UNCTAD (United Nations Conference on Trade and Development). 2000. *World Investment Report 2000*. Geneva.

### **Transactions: A New Look at Service Sector Foreign Direct Investment in Asia**

This paper presents new micro-level data to examine service sector cross-border investment flows among the Asian Development Bank regional members. The service sectors are found to receive considerably larger amounts of foreign investment when compared with manufacturing and raw materials sectors.

### **About the Asian Development Bank**

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.7 billion people who live on less than \$2 a day, with 828 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
1550 Metro Manila, Philippines  
[www.adb.org/economics](http://www.adb.org/economics)