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South-South FDI and Development in East Asia

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Abstract[1]

This paper attempts to measure the size of South-South FDI in developing East Asia and the trends in it, and the characteristics of the investing countries and the investments themselves. It also summarizes the findings of studies in individual countries of the effects of these investments. The studies of individual countries will be used to try to find some consensus on differences between South-South FDI and North-South FDI. Among the comparisons of the two types of FDI we try to summarize are be findings about their industrial composition, their effects on their host countries and their host-country firms' productivity, wages, and employment, and how these differ across industries.

Keywords: FDI, East Asia, South-South, Economic development
JEL codes: F21, F23, O19

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Introduction

The rising importance of South-South foreign direct investment (FDI), or FDI from developing countries to other developing countries, was heralded in United Nations (2006), and that new importance was emphasized by the fact that outflows from developing and transition countries were less affected by the 2009 contraction in FDI flows than those from developed countries (United Nations, 2010, p. xix).[2] FDI flows to developed countries suffered the worst decline, possibly because affiliates in developed countries were more dependent on reinvested earnings as a source of growth in FDI stocks than affiliates in developing countries, particularly those relatively new ones owned by other developing countries. A recent UNCTAD World Investment Report (United Nations, 2010) predicts that the "… shift in foreign investment inflows towards developing and transition economies is expected to accelerate…" (p. 3).

Considering the importance of FDI from developing to other developing countries, it is unfortunate that most studies examine FDI between developed countries (North-North FDI) or FDI from developed to developing countries (North-South FDI). This paper contributes to the literature by examining South-South FDI in Developing East Asia.

All firms, whether from South or North, need to have firm specific assets to compete with local firms in foreign markets. There are many reasons why the competition might be more difficult for firms from the South than for those from the North. For instance, South firms tend to have weaker brand names and inferior technologies (Cuervo-Cazurra and Genc, 2008). Moreover, host governments sometimes favor North FDI through subsidies and licenses because of the belief that they bring in more advanced technology and have access to a wider international distribution network (Stopford and Strange, 1992).

[2] See e.g. Lall (1984), Wells (1984), and Tolentino (1993) for earlier discussions on the emergence of FDI from developing countries.

However, it has been suggested that some other factors actually favor South FDI, at least in developing countries. More precisely, developing countries are typically characterized by relatively poor institutions. A lack of market mechanisms, poorly developed contracting and property rights, and poor infrastructure are obstacles that firms in developing countries need to address and overcome. The poor home market institutions will shape the business practices and organization of the firms. Once the developing country firms invest in other developing countries, their previous experience of working in a similar environment might turn out to be an advantage (Cuervo-Cazurra and Genc, 2008). The business practices and distribution networks will be well adapted to other developing countries.

> Thus a source of relative disadvantage – having a home country with poorly developed institutions – becomes a source of relative advantage when the MNE moves into other countries with poor institutional environments (Cuervo-Cazurra and Genc, 2008, p.975).

Firms from developed countries are presumably less experienced at working in ill functioning markets and might therefore face more difficulties in entering into and growing in developing countries. Differences in home country conditions might also lead to differences in their effects on the host economies. For instance, similarities in home and host countries in terms of culture and level of technology development might increase the potential for spillovers to local firms.

The main reason for differentiating North-South from South-South FDI in Developing East Asia is to learn how they differ, and how any differences, if we find them, determine the way they affect their host countries. This paper attempts to measure the size of South-South FDI and the trends in it, and the characteristics of the investing countries and the investments themselves. It also summarizes the findings of studies in individual countries of the effects of

these investments. The studies of individual countries will be used to try to find some consensus on differences between South-South FDI and North-South FDI. Among the comparisons of the two types of FDI we will try to summarize, will be findings about their industrial composition, their effects on their host countries and their host-country firms' productivity, wages, and employment, and how these differ across industries. The East Asian countries that are covered in the different parts of the paper differ depending on data availability and the coverage in previous literature.[3]

We find that a large share of FDI in developing East Asia comes from developing countries in the region. There are signs of an increased importance of this South-South FDI but data problems make it difficult to detect the exact trend. We also find South-South FDI to differ substantially from North-South FDI: the investing firms tend to locate their affiliate operations in more labor intensive industries, and their affiliates tend to be smaller in size and with lower productivity. The effects on the local economy from South-South and North-South FDI seem to differ depending on the country in question.

Trends in South-South FDI

Data for the location and size of most countries' stocks of FDI have always been scarce, especially for past periods. The UNCTAD report on South-South FDI (United Nations, 2006) is a starting point for estimates of the size of South-South FDI, particularly South-South FDI in Asia, based on balance of payments measures. For example, the report announced that "Over

[3] Note that we refer countries such as Hong-Kong, Singapore, South Korea, and Taiwan as South or developing countries. This is no longer the case but was true during large part of the period we focus upon.

half of the inflows to the region (South, East, and Southeast Asia) came from developing home countries, mostly within the region. The figures for inward stock show significant growth in the share of these sources …. to about 65% in 2004" (p. xx). "Total outflows from developing and transition economies (excluding offshore financial centres) increased …to $61 billion in 2004; most of these were destined for other developing or transition economies". As FDI of transition countries account for a very small proportion of these transactions, the estimate can also be used as a proxy for the size of South-South FDI "…The bulk of South-South FDI (excluding offshore financial centres) is intra-regional in nature…during the period 2000-2004, average annual intra-Asian flows amounted to an estimated $48 billion…" *(ibid.,p. xxiv).*

To place these numbers in perspective, we might note that total FDI inflows into South, East and South-East Asia in 2004, including flows from offshore financial centres, amounted to $138 billion in 2004 *(ibid., Appendix Table B.1)* . The inward stock in South, East, and South-East Asia in 2005 was estimated to be $1,400 billion *(ibid., Appendix Table B.2).*

Table 1 shows that the share of developing Asia in the inward stock of FDI rose from 31 to 41 percent between 1991 and 2001, before falling back to 38 percent in 2008, according to these estimates. However, the share labeled as "Others," which includes the offshore financial centres as well as others not reporting, rose from 15 percent in 1991 to 32 percent in 2008, and since developed countries are more prone than developing countries to report their FDI, it seems reasonable to suppose that most to the "Other" category was FDI from the latter group. That assumption would imply that about 70 percent of the FDI stock in developing Asia originated in developing countries.

--Table 1 about here--

Hattari and Rajan (2009) use similar balance of payment data but a different approach and examine bilateral FDI within developing Asia. They find that about 35 percent of FDI flows to developing Asia in the period 1990-2005 came from within the region. Hong Kong and China dominates both as host and home countries. For instance, FDI from Hong Kong to China and from China to Hong Kong constituted, in the period 2001-2005, about two thirds of total bilateral FDI flows in developing Asia. Moreover, either China or Hong Kong was part in 16 of the 20 largest bilateral FDI flows.

Inflows to ASEAN since 2002 can also be shown by the data from that organization (Table 2). The share of North-South FDI in inflows to that group of Southeast Asian countries was above a half from 2003 to 2006 and fell to around 43 percent in 2008 and 2009. It is hard to conclude that there was a clear trend and it is possible that the global financial crisis in the latter years had an effect on the different inflow shares (Hill and Jongwanich, 2009). The inclusion of FDI from major Offshore Financial Centers (OFCs) in 2007-2009, but not consistently earlier, suggests that their role was increasing, along with the ambiguities surrounding the ultimate origins of their FDI.

--Table 2 about here--

Some estimates by UNCTAD describe the country and regional composition of outward FDI flows for individual Asian countries. The estimates for China since 2003 (Table 3) point to its increasing role as an investor in developing countries outside Asia, in developed countries, and in Offshore financial centers, for which the ultimate destination of the investment is not reported. The predominant role for East Asia has been reduced, but it remains still, by far, the main

destination. China was already principally a South-South investor in 2003 and continued in that role in 2008, but it had a greater weight in total world investment by the later year and therefore added more to the world total of such FDI.

The estimates for Hong Kong are notable for the extremely large share of the outward stock held in, or through, offshore financial centers. There was some increase in the share of holdings that were South-South FDI in the ten years up to 2008, but the large share of FDI that was through offshore financial centers, with unknown characteristics and unknown ultimate destinations, makes the trend questionable.

For both Hong Kong and Singapore, the interpretation of outward FDI data is obscured by the fact that substantial portions of their FDI have been by firms based in other countries, both North and South. A paper by Low, Ramstetter, and Yeung (1998) reported the assertion that "…much of what the Chinese record as FDI from Hong Kong is in fact investment originating in local Chinese firms but circulated through Hong Kong in order to benefit from the incentives offered to foreign investors" (p. 144). Of Hong Kong-owned firms in Singapore, almost half the value added and more than half the output was by firms with ultimate owners outside Hong Kong (p. 146). At least in the 1990s, "…classifying Hong Kong's FDI by country of Ultimate beneficial owner greatly reduces such FDI, especially in Asia". (pp. 146-147).

FDI from Singapore, a major investor despite the country's small size, was split between about a quarter in developed countries, and three quarters in developing countries. That division has not shown any trend over the 17 years for which data are available, and does not confirm any shift towards South-South FDI from this source.

The other Asian country for which we have some data on the geographical division of outward FDI stocks is Korea. Korean FDI shifted substantially from developed to developing

countries between 1990 and 1995, and has continued to move in that direction since then, but only gradually. The change has been even more gradual if OFCs are excluded from the South-South FDI measure on the ground that the ultimate destination is unknown. Most of the Korean FDI in developing countries is in developing Asia.

--Table 3 about here--

On the whole, the outward FDI data confirm the rise in importance of countries in the South, especially Asian countries, as recipients of FDI from other South countries, particularly from Asian countries. However, the extent of the growth in this share is obscured by deficiencies in the data, particularly the growth of indirect flows, including flows through tax havens.

Evidence from the inward FDI side is less available than from the outward side. One of the few countries for which the origin of inward flows is available is Korea.[4] About 23 percent of inward flows of FDI were from the South in the late 1980s. The South share virtually disappeared in 1990-94, then returned to the late 1980s level in 1995-99, and gradually increased to 28 percent in 2005-2009. Asia's share in this rising trend was volatile, reaching a peak in 1995-99 that was not matched in the five-year periods after that.

Another country that publishes the geographical distribution of sources of inward FDI stocks is Singapore.[5] The share of developed countries barely changed from 1999 to 2004, but then fell from 74 to 64 percent by 2008. The share of developing Asia did not change substantially between 1999 and 2008, but there was a substantial growth of FDI from the Americas other than the U.S. and Canada. Unfortunately, that category includes the Caribbean

[4] See the website of OECD statistics http://stats.oecd.org/Index.aspx

[5] See Singapore, Department of Statistics, *Foreign Equity Investment in Singapore*, 2008.

OFCs, and the ultimate source of the FDI is therefore uncertain. It is therefore also uncertain whether the share of countries in the South as sources of FDI into Singapore increased at all.

An unusual set of inward FDI data is produced by Hong Kong, including a breakdown of inward FDI from offshore financial centers, identifying "FDI from Non-Operating Companies in OFCs Set Up by Hong Kong Companies for Indirect Channeling of Funds" (Table 4). Since these inflows are from affiliates of Hong Kong companies themselves, their inclusion obscures the sources of inward direct investment. The data excluding these inflows exhibit a sharper decline in the share of FDI inflows from the North and a corresponding increase in the growth of the share of FDI inflows from the South.

--Table 4 about here--

Some notes on data problems

There is some evidence that South-South FDI has become a larger part of the FDI universe, despite the weakness of much of the data from lack of reporting and from deliberate obscuring of the sources and direction of investment. The compilers, as well as the users, of the balance of payment data on FDI are aware that the flows often do not originate in the countries to which they are attributed, do not enter the countries that are their supposed destinations, and if they do enter the declared destinations, do not remain in those destinations. They often represent bookkeeping entries in corporate accounts, but no economic activity such as the employment of labor, the production of goods and services, or the installation of capital assets.

For instance, UNCTAD's 2006 *World Investment Report*, which was focused on South-South FDI, included a "cautionary note" (United Nations 2006, p. 106) that pointed out some of

the problems. For one thing, few developing countries report any data on outward FDI. Among those that do, important ones report their outward FDI as going to offshore financial centres, which, when they transship the funds, are then reported as the sources of the investment. Furthermore, "…in some developing and transitional economies (e.g. China, Hong Kong (China), and the Russian Federation) a significant amount of FDI takes the form of round tripping" (p. 106). In that case, the investment leaves the home country and returns to it quickly, never leaving the control of the home country firm, and never being used outside the home country.

Another problem is that FDI flows and stocks, as defined by the International Monetary Fund, include FDI by sovereign wealth funds (SWFs), mainly based in developing countries. While purchases of ownership shares of 10% or more (United Nations 2010, p. 14, assumes that investments other than mergers and acquisitions are "extremely limited") meet the IMF definition of FDI in terms of the extent of ownership (10%), they are more akin to portfolio investment than to private FDI with respect to the characteristics ascribed to FDI in the literature. These include the parent firm's exploitation of its firm-specific advantages, acquired by experience in the industry, by production in the home country, and by R&D or advertising. The SWFs typically have no firm-specific advantages except large amounts of capital, they do not generally seek control of firms they invest in, and move in and out of industries in pursuit of higher returns (or smaller losses), much as private equity firms do.

FDI by SWFs was a small part of FDI from developing countries through 2004, but increased rapidly after that, reaching over 25 billion in 2009, over 10 percent of all FDI outflows from developing countries (United Nations, 2010).

Finally, the reliance on balance of payments measures makes the role of financial centres important in measurement, since they are important in financial flows despite their lack of connection to productive activity. As was pointed out in the UNCTAD report on the rise of South-South FDI (United Nations, 2006), the top recipients of FDI from Hong Kong and Singapore included the British Virgin Islands and Bermuda, and of FDI from China included the Cayman Islands and the Virgin Islands. These flows would almost completely disappear from any measure based on the amount of economic activity involved.

The problems with balance of payment data on FDI limit the conclusions that can be reached with respect to sources of aggregate stocks and directions of flows. Partly for this reason, we focus most of our discussion below on data on real economic activities rather than on data on financial flows.

How do North-South and South-South FDI in Asia Differ?

Determinants of FDI

Few studies on determinants of FDI take in to account whether the host country is a developed or a developing country. At best, existing studies examine if there are differences in determinants between FDI from North and South, and not how determinants of South-South FDI differ from determinants of North-North or North-South FDI. For instance, Ma and Van Assche (2011) examine determinants of FDI from OECD and non-OECD countries. Their results suggest that FDI from OECD countries is negatively affected by institutional differences between home and host countries. They also find economic differences to be negative influences on FDI, which they

interpret as a negative effect from differences in consumer preferences. FDI from non-OECD countries is only affected by economic differences and not affected by differences in institutions.[6]

Hattari and Rajan (2009) examines the determinants of bilateral FDI flow in developing Asia using a gravity model. There are only 17 countries included and a large share of bilateral FDI flows are recorded as non-existent which calls for some caution in interpreting their results. Determinants of FDI in East Asia are similar to what has been found for other regions and countries: large countries have large FDI in- and out-flows and FDI flows decline with geographic distance. Moreover, bilateral FDI is complementary to export and is also affected by changes in exchange rates, and by institutional factors such as financial market development, political risks and the legal system.

Industry distribution of FDI

A study of manufacturing in Thailand in the 1990s by Ramstetter (2004) divided foreign plants into those from the EU, the U.S. and Japan, which we call North here, those from Singapore, Taiwan, and Korea, which we call South, and an "other" group, which we cannot identify. The numbers of plants that are part of the FDI from the two regions show relatively high representation of FDI from the South in Textiles, Apparel, Rubber products, metal products, and some machinery, but FDI in Motor vehicles and in Chemicals and products was predominantly from the North.

[6] See e.g. Fung et al. (2009) and Hill and Jongwanich (2009) for determinants of aggregate FDI outflows from East Asian countries.

An earlier study of non-oil manufacturing plants in Thailand in 1990, also by Ramstetter (1994), divided foreign-owned firms in Thailand into those based in developed economies and those based in developing economies, and compared the industry distribution of sales between the two groups. The paper reported that the share in sales by firms from developing countries was particularly high in Food, Textiles and apparel, Wood, paper, and printing, Rubber and plastics, and the combination of Precision machinery and miscellaneous manufactures. The share in sales of firms based in developed countries was especially larger in Non-metallic mineral products, Non-electric machinery, Electrical machinery and computers, transport machinery (almost entirely Japanese firms), and Non-metallic mineral products.

A recent study by Takii (2011) of Indonesian manufacturing shows employment by industry in plants owned by Japanese (North), and in plants owned by Other Asian countries (South) in three periods from 1986 through 2003. In 1997-2003, plants owned by firms from the South were the predominant employers, compared with plants of Japanese owners, in Food, Textiles, Wood and furniture, Paper and printing, and Other manufacturing, while firms from Japan were predominant in Chemicals, Basic and Fabricated Metals, and Machinery.

Working with the original Indonesian data, we use information on ownership in Indonesian plant level data between 1995 and 1997 to get additional information on the industry distribution of North and South FDI.[7] Table 5 shows the distribution of foreign owned plants in Indonesian manufacturing by home country. Similar to the finding by Takii (2011), we find that South and North FDI each contributes about 50 percent of the foreign plants. There are plants from 16 different South countries and 17 different North countries. We show the five largest home countries in each group. Among South FDI investors, South Korea is the largest home

[7] See e.g. Lipsey, Sjöholm and Sun (2010) for a description of the Indonesian plant level data.

country with about 16 percent of the foreign owned plants. Taiwan and Singapore are other large home countries, followed by Hong Kong and Malaysia.

These five South home countries are not typical developing countries, at least as measured by their income levels. They are either high- or middle income countries. For instance, in the latest version of the Penn World Tables (Heston, Summers, and Aten, 2011), Singapore is ranked as number 6 out of 188 countries in real (PPP adjusted) income per capita in 1996, and Hong Kong is ranked as number 16, both higher than the median developed country. Taiwan is ranked 32nd and Korea as 36, both not far from the developed-country median. Malaysia is ranked 60. All of these countries are at a far higher level of development than the host country: Indonesia is ranked as number 110 in terms of income per capita. A recent paper by Peter Petri (2011) refers to this pattern as "Asian exceptionalism", in that intra-Asian FDI "…is dominated by flows from high-technology economies to medium technology economies, while FDI elsewhere primarily consists of flows among high technology economies."

The distribution of North FDI in Indonesia is much more skewed than the South distribution. Japanese plants account for one third of total FDI and two thirds of North FDI in Indonesia. Investments from western countries are not very important. The next largest home country is the US with only about four percent of total foreign plants in Indonesia. Germany, Belgium/Luxemburg, and Switzerland have each about two percent of the foreign plants.

--Table 5 about here--

Table 6 examines the sector distribution of foreign plants by home country. There are some noticeable differences in the distributions of FDI from different home countries. For instance,

more than one third of plants from the North are located in the Fabricated Metals industry, including, for instance, machinery and electronic products. Fabricated Metals is an important industry also for South FDI with about 23 percent of the plants, but not the most important industry. Instead, 30 percent of South plants are in the labor intensive Textile industry. Textiles are not very important for North FDI, which instead has a relatively large share of 23 percent in the Chemical industry.

Looking at individual home countries, it is seen that their plants tend to be highly concentrated in a few industries. For instance, the largest investor, Japan, has most of its plants in the Fabricated Metal industry. Plants from the US, Germany and Switzerland cluster in the Chemical industry. Belgium and Luxemburg differs from the other included countries by a high concentration of plants in the Food Product industry.

South Korean, Taiwanese and Hong Kong plants are primarily located in the Textile industry. Singaporean FDI is more like Japanese with a large share in Fabricated Metals and also with a relatively large share in Chemicals. Singapore is a country that receives large amounts of FDI inflows and as discussed earlier, it is possible that much of the FDI in Indonesia from Singapore is owned by regional offices of foreign owned Singaporean companies, a factor that could explain some of the similarities with the distribution of plants from the North. Malaysia differs from all other countries by its high concentration in the Wood Product industry.

--Table 6 about here--

Looking at the results in other studies, among investors in China, according to Abraham et al. (2010), those from Hong Kong, Macau, and Taiwan (South-South investors) are particularly

present in such "…labour-intensive sectors as …Apparel and other textile products…". Investors from other countries are predominant in Chemicals and allied products, Industrial machinery and equipment, Electronic and other electric equipment, and Transportation equipment (p. 151 and Table 2).

Comparisons of plant size

Ramstetter (1999) compared the average sizes of plants from home countries in the North and the South, as measured by output per plant, in Hong Kong and Singapore in the late 1980s and the early 1990s. Plants of parents from the North were far larger than plants owned by parents in South countries throughout the period. There was some hint of a trend toward reducing the differential for Japanese plants in Hong Kong, but not in Singapore, but in general, parents from the North were producing in plants more than twice as large in terms of output.

A similar picture was found in a comparison in terms of employment size. Plants in Hong Kong from developing countries were more than a third smaller than those from developed countries, although the differential with Japanese plants became much smaller at the end of the period. In Singapore, the differentials were much larger, more than half, and showed no decline over time.

In Thailand, in 1990, Ramstetter (1994) found that among firms from all investing countries, those from developed home countries were, on average, much larger than those from developing home countries. There were two expected exceptions, Textiles and apparel and Rubber and plastics, where the developing country affiliates were larger, on average. There were also two unexpected exceptions, Transport machinery and Precision machinery and miscellaneous manufacturing.

Part of the smaller average size of affiliates of developing country firms arises from the avoidance of small affiliates by developed country parents. That possibility is tested by Ramstetter by excluding small affiliates and comparing average sales size only for medium to large firms. In this comparison, the affiliates of developed-country parents are again larger in most industries, now including both Textiles and Apparel and Rubber and plastics, but the other two exceptions remain.

Comparisons of productivity

One of the major topics of interest in comparisons of foreign-owned with locally-owned plants is productivity, either labor productivity or total factor productivity, but comparisons among countries of origin are more unusual. Takii (2011), in a study on Indonesian manufacturing, found significantly higher productivity in plants representing FDI from the North (Japan) than in plants representing FDI from the South. The industry distribution of these differences is also of interest, because the exceptions to significant North productivity advantages were in Foods, Textiles, and Wood/Furniture, industries in which FDI from the South was most frequent.

Ramstetter (1999) examined differences in labor productivity, measured by real output per worker, between plants in Hong Kong and Singapore owned by firms from North countries and plants in the same locations owned by firms from South countries. The plants owned by firms in the North reported higher productivity in Hong Kong by close to 20 percent, and higher productivity in Singapore by over 50 percent for U.S. and European–owned plants and close to a third for Japanese-owned plants.

Ramstetter (1994) compared value added per worker in foreign-owned manufacturing plants in Thailand. For manufacturing as a whole, this crude measure of labor productivity, or mixture of labor productivity and capital intensity, showed Japanese-owned firms 2&1/2 times the level of firms from developing countries and other developed-country firms about 75% higher. If the comparison was confined to "Medium-Large" firms with both groups of owners, the differentials are a little smaller, but not very different. The margins by which value added per worker in Japanese and other developed-country affiliates exceeded those of affiliates from developing countries were particularly high in Chemicals, Non-metallic minerals, Metals and metal products, Non-electric and Electric machinery and computers, and Motor vehicles. On the other hand, plants based in developing countries reported value-added per worker above or close to that of developed-country affiliates in Foods, Beverages and tobacco, Wood and paper, and Rubber and plastics. Comparing only Medium-large plants did not greatly change the ordering.

Additional comparisons of plant characteristics

Using the above described Indonesian plant level data, we made additional comparisons between North and South FDI that covers many of the aspects discussed above. The ratios of North to South in Table 7 show, for instance, that North plants are on average 40 percent smaller than South plants in manufacturing as a whole. That size relationship is different from what we have seen in other countries discussed above. However, this difference is partly caused by a different sector distribution of plants. Looking at the difference in individual sectors, South plants are larger than North plants in five out of nine sectors. The difference in size is particularly large in Paper Products and in Basic Metal Industries, with substantially larger South plants in the former and substantially larger North plants in the latter.

Continuing with the other characteristics, it is seen that there is a large degree of differences between sectors but some general observations can be made. Firstly, North plants tend to pay higher blue-collar wages and to be more energy intensive than South plants. Secondly, South plants tend to be more export oriented than North plants.

--Table 7 about here--

Singapore also provides data that enable a comparison of several aspects of FDI from developed and developing countries (Table 8). Average output per worker in manufacturing plants in Singapore owned by developed-country (Japan, the United States, and Europe) firms was more than 2&1/2 times the average in firms owned by firms from developing countries (All others). Value added per worker was only 1&1/2 times as high. The difference between the output and value added measures suggests that affiliates of developed country firms were using a higher proportion of purchased inputs than affiliates of developing-country firms, perhaps because they were more deeply involved in worldwide production networks. Manufacturing establishments owned by developed country firms in all industries combined were about 25 percent larger, measured by employment, than those owned by developing-country firms. In addition to relative high productivity, firms from developed countries paid slightly higher wages. However, export shares and capital intensities were higher in firms from developing countries than in firms from developed countries.

--Table 8 about here--

Comparisons of spillovers to local firms

One of the issues of greatest interest to host countries is the extent to which the technology brought to the host country by foreign investors is absorbed by local firms, an absorption that is referred to as "spillovers" to local firms. These could be spillovers to competing local firms in the same industries as the investors, who imitate the foreign firms' techniques, copy their products or methods of doing business, or learn from them in other ways, possibly by hiring away some of their employees. There could also be spillovers to firms that sell to the foreign firms, who may be willing to invest in improving the products of their local suppliers, or spillovers to customers, who gain from the availability of improved products and may be educated in their use by the foreign producers.

Although there are very few studies of spillovers that distinguish among sources of FDI, it is of interest that a meta-analysis of studies of spillovers in developing countries other than China found positive spillovers in 6 and mixed results in 3, all of which were for India. Of ten studies of China, considered a transition country rather than a developing country, eight found positive spillovers, one found a curvilinear relationship that had positive and negative segments, and one did not report either positive or negative results (Meyer and Sinani, 2009).

A study by Buckley, Clegg, and Wang (2002) of manufacturing plants in China, compares the effects of the presence in an industry of affiliates of parents in Hong Kong, Macau, and Taiwan with those of affiliates of parents in other countries, mainly the United States, Europe, and Japan. They found that the former had no effect on the productivity of locally-owned firms while that of the presence of the affiliates of parents in the latter group led to productivity gains in locally-owned firms.

Du, Harrison, and Jefferson (2010) make a similar distinction of foreign firms in China. They find little evidence of spillovers within the industries of investment, but strong evidence for spillovers to both supplying industries and customer industries. However, both effects take place from North-South FDI, but neither effect is observed from the FDI identified as South-South FDI. A later paper by the same authors (Du, Harrison, and Jefferson, 2011) confirms the findings for upstream and downstream spillovers and, more uncertainly, for horizontal spillovers. They suggest that the lack of spillovers from FDI from Hong Kong, Taiwan, and Macau suggests that much of that may really be round-tripping, rather than FDI. An additional finding is that FDI in firms benefiting from tax incentives to investing firms "generates greater productivity spillovers than unsubsidized firms." (p. 28).

Another paper on China, based on four years of Census data, that uses the distinction between FDI from Hong Kong and Taiwan (South-South FDI) and FDI from all other locations (Xu and Sheng, 2011) finds evidence of smaller spillovers from the South-South FDI. That is the case for the OLS equations and in one of the first difference equations.

Wei and Liu (2006) also find that FDI from OECD countries has played a much greater positive role in inter-industry productivity spillovers but that there are not differences between FDI from different home countries in generating intra industry spillovers to indigenous Chinese firms.

Takii (2011) uses information from different sources to construct a panel of Indonesian plants between 1990 and 2003 with home country information on foreign plants. His focus is not on a comparison between North and South but rather between Japanese, other Asian, and Non-Asian FDI. Judging from our data used above, non-Asian FDI is almost entirely made up of FDI from North although we observe a few plants from Africa and Latin America.

The largest spillovers were from other Asian plants followed by spillovers from Japanese plants. There were no statistically significant spillovers from non-Asian plants. Hence, South FDI generates the largest spillovers and the most important distinction seems to be between Asian and non-Asian FDI rather than between North and South FDI.

Takii proposes two different explanations for a difference in the degree of spillovers. The first one is that other-Asian countries are at a development level more similar to that of Indonesia and spillovers might be largest when the technology differences between home and host countries are not too large. However, most Asian FDI comes, as we previously noted, from relatively developed Asian countries such as Korea, Taiwan and Singapore. Another proposed explanation is that the cultural distance between Asian countries and Indonesia is smaller than the cultural distance between non-Asian countries and Indonesia, and that a small cultural distance enhances spillovers.

Summary and concluding remarks

The rise in importance of South-South FDI within Asia seems well established, although the extent is blurred by the use of offshore financial centers and the inclusion of FDI from sovereign wealth funds and other sources that probably do not possess the intangible assets associated with FDI in the literature.

Our analysis shows that the increased presence of South FDI in East and South East Asia might have different effects on host economies from those of FDI from North. First, within manufacturing, FDI from South locates mainly in Textiles and apparel, Food, Wood and paper products, and Rubber products. Firms from the North predominated in Chemicals, Transport equipment, and some, but not all, types of machinery. Although these industry categories are

wide, it would be fairly safe to characterize the second group of industries with mainly developed-country owners, as more capital-intensive and more technology-intensive than those with mainly developing-country owners.

Secondly, plant size, as measured by output per plant and employment per plant, regardless of industry, shows that plants with developed country owners tend to be much larger than those with developing-country owners. Since plant sizes differ substantially by industry, and clothing plants, for example, are typically much smaller than auto plants, these differences partly reflect the industry distributions mentioned above. The margins are larger for output per plant than for employment per plant, pointing to productivity differences as well as industry mix. Indonesia differs from many other countries in that South plants are larger than North plants in more than half of the examined industries.

Thirdly, plants from North tend to have higher productivity than plants from South. For instance, labor productivity was higher in Japanese-owned plants than in plants owned by firms from other (developing) Asia in every industry in Indonesia. However, the productivity difference was not statistically significant in Foods, Textiles, and Wood/Furniture, the industries in which plants from the South were most important. We find similar productivity advantages for firms from the North in Thailand, Hong Kong and Singapore, but firms from the South have sometimes comparable high productivity in the industries where they often were important, such as Food, Beverages, and tobacco, Textiles and Apparel, and Wood products.

Finally, the results reported in studies of spillovers to local firms are mixed, as in most of the spillover literature. A number of studies find positive spillovers in China, some within the same industry as the foreign affiliates and some to local firms in upstream and downstream industries. Most studies find a difference between the spillovers from firms from developed and

developing countries: there tend to be positive spillovers from the former and no spillovers from the latter. The results seem to be slightly different in Indonesia where FDI from developing countries generates more spillovers than FDI from developed countries, but there are also spillovers from Japanese FDI.

To sum up, this paper shows that the characteristics and economic effects of FDI differ between host countries. This complicates any policy recommendations. Considering the increased global competition for FDI inflows in recent decades, a reasonable recommendation would be to welcome any FDI, irrespective if it comes from the North or South. Moreover, the test of whether North-South and South-South investments that are identical in every measurable dimension produce different spillovers to domestic firms may for host country governments not be as relevant as whether they are typically different in measurable dimensions such as size, industry, working conditions, and technology. As shown above, in most of these characteristics, there does seem to be some edge in favor of benefits from North-South FDI.

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Table 1

Major Sources of FDI to South, East, and South-East Asia,

1991, 2001, and 2008

Country/Region of origin	1991		2001		2008	
	Value $ bill	Share %	Value $ bill	Share %	Value $ bill	Share %
World	142	100	1,124	100	2,306	100
South, East and Southeast Asia	43	31	462	41	875	38
China	0.6	0.4	125	11	307	13
NIEs	38	27	307	27	512	22
Others	21	14.7	306	27	735	32
OFCs[a]	0.7	0.5	204	18	349	15

[a]4 Offshore Financial Centers: Bahamas, Bermuda, British Virgin Islands, and Cayman Islands.

Source: United Nations (2010), Table II.6

Table 2

Sources of FDI Inflows to ASEAN

Share (%)	2002	2003	2004	2005	2006	2007	2008	2009
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
North	39.48	53.06	62.31	54.11	54.26	49.16	42.82	43.45
South	60.52	46.94	37.69	45.89	45.74	50.84	57.18	56.55
ASEAN	21.16	11.36	7.98	9.17	11.92	13.01	21.13	11.18
Other than ASEAN incl. OFCs	39.36	35.58	29.70	36.72	33.83	37.82	36.05	45.38
Other than ASEAN excl. OFCs	n.a.	33.14	22.08	n.a.	n.a.	31.30	26.63	34.83

Note: Regions are given as follows;
Total – as reported
North – the sum of USA, Japan, EU, Australia, Canada, and New Zealand
ASEAN – as reported
South other than ASEAN including OFCs – Total minus (North and ASEAN)
South other than ASEAN excluding OFCs – South other than ASEAN minus OFCs (when OFCs are available)

Source:
Statistics of Foreign Direct Investment in ASEAN, Ninth Edition, 2007, the website of ASEAN, http://www.aseansec.org/21402.htm

Foreign Direct Investment Statistics, the website of ASEAN, http://www.aseansec.org/18144.htm

Table 3
Outward FDI stock in China, Hong Kong, Singapore and Korea ($ millions)

	China		Hong Kong		Singapore		Korea	
Destination	2003	2008	1998	2008	1990	2007	1990	2005
Total [a]	33,222	147,949	223,811	762,038	7,808	218,201	2,301	38,680
Total	33,222	183,971	223,811	762,041	7,808	206,461	2,306	44,093
Developed	1,492	10,700	18,456	15,096	2,136	53,262	1,326	18,524
Developing	31,731	173,271	200,780	713,270	5,673	153,199	980	25,569
Total minus OFCs	28,954	153,164	105,579	408,993	7,808	206,461	2,305	42,274
Total Asia	26,018	129,906	79,606	354,855	3,991	92,912	697	19,750
East Asia	25,329	119,271	73,771	338,636	1,720	44,985	53	13,451
South Asia	46	1,738			128		31	936
Southeast Asia	587	6,487	5,252	16,218	2,045	43,181	566	5,083
OFCs [b]	4,268	30,807	118,232	353,048			2	1,819
Other, except developed	1,445	12,558	2,942	5,367				
Other						36,583	282	3,630
Unspecified			4,575	33,675	1,682	23,704	0	369

Source: UNCTAD.

Table 4

Hong Kong: Shares (%) of World Areas in Inward FDI Stock

A. Including All OFC FDI

	1999	2004	2009
Total	100.0	100.0	100.0
North[a]	22.0	21.8	15.2
South	71.8	73.5	79.5
Asia, exc. Japan[b]	30.4	32.1	38.9
China	25.9	29.0	36.4
OFCs[c]	41.4	38.9	40.6
Others, incl. unknown	6.1	7.3	5.2

B. Excluding FDI from Non-Operating Companies in OFCs Set Up by Hong Kong Companies for Indirect Channeling of Funds

	1999	2004	2009
Total	100.0	100.0	100.0
North[a]	34.2	29.9	20.9
South	57.2	60.7	72.2
Asia, exc. Japan[b]	47.2	44.0	53.3
China	40.1	39.7	49.8
OFCs[c]	10.0	16.7	18.9
Others, incl. unknown	8.6	9.3	7.0

[a]Netherlands, U.S., Japan, U.K., Australia
[b]China, Singapore, Taiwan, and Cook Islands
[c]British Virgin Islands, Bermuda, Cayman Islands

Table 5

Distribution of FDI in Indonesia by country of origin
(share of total foreign plants 1995-1997)

South		48.3
	South Korea	15.8
	Taiwan	11.5
	Singapore	8.5
	Hong Kong	4.8
	Malaysia	1.9
North		51.7
	Japan	33.0
	US	3.7
	Germany	2.5
	Belgium/Luxemburg	2.1
	Switzerland	2.0

Table 6

Distribution of Indonesian plants by different home countries 1995-97 (share of total plants from each home country)

		Food products	Textiles	Wood products	Paper products	Chemicals	Non-metals	Metal industries	Fabricated metals	Other	Total
North		**13.5**	**12.1**	**7.8**	**1.4**	**23.4**	**4.0**	**1.6**	**34.0**	**2.3**	**100.0**
	Japan	8.7	15.6	8.4	1.2	17.9	2.6	2.4	41.7	1.5	100.0
	US	16.3	8.1	8.1	2.2	41.5	4.4	0.7	18.5	0.0	100.0
	Germany	6.8	5.7	5.7	0.0	54.5	0.0	0.0	27.3	0.0	100.0
	Belgium/Luxemburg	66.1	1.7	5.1	0.0	22.0	5.1	0.0	0.0	0.0	100.0
	Switzerland	21.5	0.0	0.0	0.0	46.2	0.0	0.0	15.4	16.9	100.0
South		**8.2**	**30.0**	**9.2**	**3.3**	**14.6**	**2.1**	**3.5**	**22.9**	**6.3**	**100.0**
	South Korea	3.1	46.7	6.6	2.4	11.2	1.8	0.6	12.5	15.1	100.0
	Taiwan	5.5	31.3	9.6	4.7	10.4	1.6	11.7	22.7	2.6	100.0
	Singapore	11.5	9.3	9.3	4.3	22.9	3.1	1.5	37.8	0.3	100.0
	Hong Kong	12.6	34.6	7.5	1.9	14.5	0.0	0.0	25.2	3.8	100.0
	Malaysia	4.2	4.2	43.1	0.0	19.4	0.0	0.0	26.4	2.8	100.0

Table 7

Plant characteristics in Indonesia. Ratio between North and South

	Total	31	32	33	34	35	36	37	38	39
Size	0.6	0.6	0.5	0.7	0.2	1.3	2.6	4.6	1.0	0.4
Productivity	1.1	0.9	1.3	1.1	0.8	1.0	0.8	0.4	1.4	1.6
Blue collar wages	1.2	0.8	1.1	1.2	1.0	1.2	1.0	1.8	1.2	1.1
White collar wages	1.1	1.1	0.7	1.4	0.9	1.4	1.0	3.9	1.4	0.4
Energy intensity	1.4	1.0	1.6	0.9	0.5	1.5	3.5	2.2	1.3	1.3
Export share	0.7	0.7	0.9	1.1	0.5	0.6	2.0	0.8	0.7	1.0

Note: Size is measured as number of employees; Productivity is vale added (in 1000s or Rp) per employee; Wages are in 1000s of Rp per employee; Energy Intensity is quantity of electricity per employee; Export is share of output.

Table 8

Singapore: Characteristics of Foreign-owned Manufacturing Establishments, by Country of Capital Source

Country of Capital Source (50% or more)	Japan, U.S., and Europe	Other Countries
Workers per Establishment	207.39	164.93
Output per Establishment	247,022.77	76,655.86
Output per Worker	1,191.09	464.76
Average Remuneration per Worker	55.61	49.26
Value Added per Worker	223.85	144.41
Net Fixed Assets per Workers	235.65	282.57
Direct Exports/Sales	0.74	0.79

Source: Singapore, Economic Development Board (2009)