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Can China and India Double Their Inward Foreign Direct Investment?

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Abstract

Like many other developing countries, both China and India have made the remarkable transformation from being hostile to foreign direct investment (FDI) in the 1970s to eagerly attracting it now. At one level, the two countries seem to be in different categories: China a super-magnet for FDI, while India lagging seriously behind. But both countries have high levels of corruption and red tape which could have reduced their FDI more than what their low wages could bring in.

This paper addresses three questions. First, do corruption and red tape significantly affect a host country's ability to attract FDI after we take into account a number of determinants of FDI suggested by the theories? (Answer: Yes, they do.) Second, does China's apparently large number of inward FDI make it an exceptional host? (Answer: No. China in fact is a significant under-achiever as a host of FDI from the major source countries.) Third, can China and India double their inward FDI? (Answer: Yes, if they can manage to seriously address the corruption and red tape problems.)

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1. Introduction

Many developing countries have made a remarkable transformation from being hostile to foreign direct investment (FDI) in the 1960s and 1970s to eagerly attracting it in the 1980s and 1990s. A celebrated example is China, which had virtually no foreign investment in the 1970s but now is a major host country of FDI. Studies (Lardy, 1992 and 1994; Wei, 1996) have shown that foreign-invested firms have contributed significantly to China impressive export expansion and to China's overall economic growth. Indeed, as the Chinese economy slows down due to the recent Asian economic crisis, the Chinese government is intensely worried about the consequence of a possible decline in the inward FDI into China. India's recent bout of courtship with FDI started in earnest in 1991. While the FDI inflow into India has increased steadily, it still lags significantly behind China.

Both China and India are convinced that inward FDI can and does play an important role in their aspiration for a sustained and fast economic growth. Both countries eagerly hope to attract ever more FDI. China, for example, offers super-national treatment of foreign firms in a variety of ways (e.g., benefits of reduced or exempted taxes that are not available to domestic firms).

At one level, the challenge facing China and India is quite different. According to officially reported value of FDI into China (China State Statistics Bureau, 1999), China for the last few years has been the largest developing country host of FDI, and the second largest in the world (only after the U.S.). In fact, the numbers on China's inward FDI look so that some observers call China "the world's strongest magnet for overseas investment[1]," or use the phrase "China fever"[2] to describe the inflow of FDI into the country. If China has already been the "strongest magnet," is there much scope for its inward FDI to increase significantly?

India, on the other hand, is a late comer. Its "open door" policy that started in 1991 has brought in more FDI, but its total FDI is still less than a tenth of FDI into China. The Indian

1 The Economist (US edition), March 1, 1997 p38.
2 P.T. Bangserg, Journal of Commerce, December 27, 1996, p3A.

government has been actively looking for ways to increase its inward FDI, including mimicking China in offering super-national treatment to foreign firms.

China and India do share some common features. Both countries (are perceived to) have relatively high levels of bureaucratic corruption. For example, a subjective corruption index promulgated by Transparency International on a 0-10 scale where 10 is the most corrupt, rated China and India as 6.5 and 7.1, respectively (see Table 5 for details). [In comparison, Singapore was rated as 0.9.] Both China and India also have a Byzantine maze of bureaucratic red tape. According to a survey of firms around the world by the World Bank (1997), on a 1-7 scale where 7 indicating the highest level of regulatory burden, China and India received a rating of 4.58 and 5.1, respectively. [In comparison, Singapore's bureaucratic burden received a score of 2.08. See Table 5 for details.]

Using data on US outward FDI, Hines (1995) shows that American firms tend to invest less in more corrupt countries. He interpreted this as a consequence of the U.S. Foreign Corrupt Practice Act, which, until 1999, had made the U.S. the only source country in the world that penalizes its firms from bribing foreign government officials. Using a matrix of bilateral FDI from 14 source countries to 41 host countries, Wei (1997) shows that corrupt countries receive less FDI from all major source countries, not just from the U.S.

This paper aims to achieve several objectives. First, it investigates whether corruption and red tape continue to be significant deterrents to FDI after we take into account a number of variables that are suggested by recent theories of multinational firms a la Markusen (1984) and (1995) but were not included in Hines (1995) and Wei (1997). Second, it examines whether China's apparently impressive numbers on inward FDI makes it an exceptional host. Third, it offers a (striking) sample calculation of how much increase in the inward FDI China and India could expect if they are able to drastically reduce corruption and red tape.

To reveal the bottom lines up front, I will show that corruption and red tape are significant deterrents to FDI. Moreover, China is not an exception. On the contrary, as far as the FDI from the major source countries is concerned, China is a significant under-achiever as a host relative to

its potential. While offering further tax benefits by China or India could only marginally raise their inward FDI, reducing red tape and corruption to a level comparable to Singapore, on the other hand, could more than double their FDI.

Obviously, reducing corruption and red tape is easy said than done. It is out of the scope of this paper to spell out an anti-corruption strategy for China and India. Nonetheless, towards the end of the paper, I will speculate on a few things that the two countries could do.

This paper has two objectives. First, it will show that as far as FDI from the world's leading source countries is concerned, China is not a special case. Contrary to the impression one gets from the popular media, China continues to be an under-achiever, rather than an over-achiever. What is unusual about China is that more than half of its inward FDI comes from Taiwan, Macao, Singapore, and particularly Hong Kong, which are otherwise not significant international investors.

Second, the paper will examine whether corruption by government officials, excessive burden of regulation, and other institutional characteristics may have contributed to the relatively low volume of inward FDI from the major source countries.

[In an earlier (1995) paper using data from the United Nations Council of Trade and Development (UNCTAD), I fitted a linear regression on direct investment during the 1987-90 period from the world's five largest source countries to a number of host countries, and compare China's actual reception of FDI with its potential as predicted by the regression. Based on that methodology, I found that the FDI into China was significantly below its potential, both in economic and statistical sense.

A number of factors could possibly explain that finding. First, given that China's opening up to foreign investment started relatively late (from 1980), and that the Tiananmen Square Incident temporarily diminished the FDI over 1989-90, the 1987-90 may not be a good period to judge China's appeal as a host country. FDI in China has grown exponentially recently. For example, the total FDI in China in 1997 was 1200% more than that in 1990 (See Table 2 below). Second, the econometric specification was perhaps overly simplified. This could bias the result to exaggerate the potential amount of FDI that China could receive. Third, while the earlier paper examines the host country size,

level of development, and relationship with the source country as determinants of FDI, it neglects the importance of business environment, particularly the extent of corruption by government officials in the host country.]The current paper seeks to advance our understanding of the FDI into China in a number ways. We will use more recent data with more source countries, i.e., bilateral stock of direct investment up to 1996 from the OECD. We will employ fixed-effects, random-effects and Tobit regressions to check for robustness of the results. And we will explicitly examine whether corruption and red tape have deterred foreign direct investment.]

The paper is organized in the following way. Section 2 reviews the recent trend in FDI into China and India, and the source country composition of the FDI. Section 3 examines whether corruption and red tape deter FDI, and whether China has been an exception. Section 4 concludes with a discussion on the prospect for China and India to attract more FDI in the new century.

Section 2: Evolution of China and India as a Host of FDI

2.1 The overall picture

The transformation of China from a country with virtually no foreign investment before 1979 to "the world's strongest magnet for overseas investment" is remarkable and has been well documented.

Before 1979, to say that foreign investors were viewed with suspicion is a serious understatement. The Chinese government was downright hostile to private enterprises, including if not especially foreign-owned private enterprises. Under Deng Xiaoping, the promulgation of the 1979 "Law on Chinese-foreign equity joint ventures" together with the establishment of four special economic zones formally signaled the adoption of the "open-door" policy by the central government.

Typical with the Chinese characteristics of cautious reforms, the welcome mat for foreign direct investment was extended gradually in the early stage. At the beginning, only equity joint-ventures or contractual joint-ventures were allowed. No wholly-owned foreign firms were allowed. Foreign exchange use was tightly regulated. In fact, what is needed to import raw materials in principle should be raised by the firm themselves (when no open-market existed). There was tight export performance requirement. Sometimes, 100% of the output was required to export. On each of this, the restriction has been relaxed over time. For example, by now, the annual value of inflow to establish wholly-owned foreign firms (US$16.5 billion in 1998) has exceeded that of contractual joint ventures (US$9.3 billion in 1998), and is close to that of the equity joint ventures (US18.8 billion in 1998, MOFTEC, 1999).

Table 1 lists the evolution of all the major laws/regulations that are promulgated by the Chinese and India central governments with regard to foreign direct investment. Two things are worth noting. First, in terms of the starting date of the reform, China was a decade ahead of India. [On the other hand, when the India government decided to open up in 1991, it chose to liberalize more quickly than China (a "big bang" reform.] Second, on several occasions over the last two decades, the Chinese government promulgated laws and regulations specifically designed to attract investment from oversees-Chinese, particularly those from Hong Kong, Taiwan and Macao. Third, China offers super-national treatment to foreign firms. For example, foreign firms typically receive an exemption of income tax for the first two profitable years followed by three additional years of 50% tax reduction. Such benefits are not offered to domestic Chinese firms. [India so far has not offered comparable super-national treatment.??? Possibly bound by the WTO???]

[Table 1: Evolutions of Laws/Regulations Governing FDI in China and India]

In Chinese statistics, two notions of FDI are used: the contractual amount and the realized value. The contractual amount is the amount that investors plan to invest over a period of time at the time of applying for approval for investment. The actual or realized value is not bound by the contractual amount, and indeed is typically much smaller. Because being able to attract foreign investment by local officials is often counted as a significant achievement by their superiors, government officials have an incentive to encourage foreign investors to overstate the (not legally binding) contractual amount . For this reason, all the data on FDI in this paper refer only to the realized values.

Table 2 exhibits the trajectory of the realized flow of FDI going into China and India every year from 1983 to 1999 (estimated amount). Up to very recently, the growth is truly exponential: the total inward FDI flow was a mere 0.64 billion dollars in 1983. It grew to 3.19 billion dollars in 1988, to 33.77 billion dollars in 1994, and then peaked at 45 billion dollars in 1997-98. The inflow of FDI did not do well in 1998 and 1999 due to the Asian crisis (and the slow adjustment of China's domestic

economy). Every year since 1995, China received more foreign direct investment than any other country except for the U.S.

[Table 2: Annual FDI Inflows into China and India]

Foreign direct investment takes one of the following four forms: joint ventures, contractual joint ventures, wholly-owned foreign firms, and joint exploration (mainly for offshore oil). Joint ventures are by far the dominant form of foreign direct investment, account for roughly half of all FDIs throughout the sample. Foreign wholly-owned firms as a form of FDI are catching up fast, growing by 400% cumulatively over the 1992-96 period, as compared to the 279% growth rate for all FDI in the same period.

2.2 Source Country Composition of FDI

FDI into China has a very unusual composition of source countries. According to the United Nations, the world's five most important source countries in terms of outflow in during 1990-1995 are the United States, Japan, Germany, the United Kingdom, and France. Collectively, they accounted for over 70% of all direct investment from developed countries.

If one looks at who invests in China (Table 2), one finds that Hong Kong is the dominant direct investor in China. Hong Kong's annual inflow accounts for a half or more of the total FDI into China for almost every single year during the 1992-97 period. The Hong Kong's dominance tends to be more important in earlier years. So if one looks at the stock of FDI, Hong Kong's share is close to 60%. Japan and the U.S. are the second and third largest investors in China (the relative ranking may switch between the two depending on the year one looks at). However, each invests significantly less than Hong Kong, typically less than a quarter of what Hong Kong invests. Britain, France, and Germany are important source countries. However, their investments not only lag distantly behind that of Hong Kong, but sometimes also behind Singapore and Macao.

[Table 3]

One may question whether Hong Kong's investment in Mainland China should be counted as foreign direct investment. This is particularly so since July 1, 1997, Britain has formally turned over the territory back to China. In that connection, one can at most treat investment coming from Hong Kong as quasi-foreign[3].

Part of the reported FDI from Hong Kong is in fact capital originated from the Mainland to come back to the Mainland disguised as Hong Kong investment, sometime labeled as "round-tripping" capital to take advantage of tax, tariff and other benefits accorded to foreign-invested firms. One estimate puts the round-tripping capital at 15% of the total Hong Kong investment in China in the Chinese official statistics (Huang, 1998). The round-tripping capital is best described as "false-foreign" direct investment. Using the previous estimate, the "false-foreign" investment was on the order of 3 billion U.S. dollars in 1997, or over 6% of the total FDI flow into China according to the official statistics.

To summarize, if one excludes the false-foreign and quasi-foreign direct investment in China, the "true" foreign direct investment would be 50% smaller in terms of the flows in recent years, and 60% smaller in terms of the stocks.

Section 3: China as a Host of Direct Investment from the Major Source Countries

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[3] A part of the Hong Kong investment may be disguised Taiwanese investment to avoid political inconvenience with the Taiwanese government. If one adopts the view that Taiwan and China belong to the same country, which is the official position of the two governments on both side of Taiwan Strait, then this part of investment should also be treated as quasi-foreign.

Another part of the Hong Kong investment may truly be investment from the world's major source countries such as the U.S. and U.K. This is not likely to be big. We will return to this discussion in the later part of the paper.

I now turn to examining whether China is an underachiever as a host of investment from the world's major source countries, and whether corruption has deterred foreign investment. Let me first explain the data and the specifications of the statistical framework before presenting and discussing the results.

3.1 Data

Foreign Direct Investment

We focus on bilateral stock of foreign direct investment from 17 major source countries to forty-two host countries. To minimize the influence of year-to-year noise in the data, I use the three-year average over 1994-96. The data comes from the OECD bilateral FDI data base covering the outward FDI by destination (Table 8 for each individual country, OECD). It is based on the reports by individual source countries. The source countries include: the United States, Japan, Germany, the United Kingdom, France, Italy and Norway. The number of host countries is constrained by availability of data on corruption and tax.

The data "relies on a database developed by the OECD Directorate for Financial, Fiscal and Enterprise Affairs for comprehensive statistics on international direct investment. Data collection is based on a joint OECD/EUROSTAT questionnaire" (OECD, 1998, p9). The raw data typically come from source countries' national statistical offices or central banks. Efforts were made by the OECD to improve the comparability of the data across countries "based on the recommendation of the *IMF Balance of Payments Manual*, Fifth Edition and the *OECD Benchmark Definition of Foreign Direct Investment*, Third Edition." In spite of these, there are still questions about comparability of FDI definitions across reporting countries. The most notable reason for lack of comparability is that reinvested earnings are counted as part of FDI by some source countries (which is conceptually correct) but not by others (OECD, 1998, p9). For details, see the "Technical Notes" for each source country at the end of OECD(1998).

As a digression, it is useful to compare FDI into China as reported by the Chinese side versus that reported by the investing country's side. Table 4 presents such a comparison (of annual flows) for the period 1990-1997. A striking feature is the discrepancies, sometimes quite large, on the bilateral FDI from the two reporting sources. For example, in 1996 and 1997, the Chinese source claims to have received FDI inflow from the US on the order of the US$3.4 billion and 3.2 billion, respectively. The US side (based on the survey of US firms by the US Commerce Department) reports only US$ 0.9 billion and 1.2 billion, respectively. The difference is by a factor of 3. Generally speaking, the Chinese-reported inflows were much greater than the source countries' own reporting for FDI from the United Kingdom, France, Australia, and Italy as well.

The notable exceptions are FDI from Japan and Germany, where the reported numbers from the two sources were on the same order of magnitude. However, it is worth noting that the Japanese reported number refers to the approval values of FDI rather than actual realized values. Since the former is generally much bigger than the latter, it is quite possible that the Chinese reported FDI from Japan is still greater than the real amount coming from Japan. Germany-reported German investment in China is based on an annual stock survey of German firms. "[A] reporting obligation exists if a resident holds more than 20% of the shares or voting rights in a foreign enterprise." Hence, a German-Chinese joint venture in which the German share is less than 20% would not be reported in the German data but would be reported in the Chinese data.

[Table 4]

There are several reasons why the Chinese data may be overstated (related to bureaucrats' incentive to exaggerate their ability to attract FDI, and foreign investors' incentive to exaggerate the amount of investment in order to report lower taxable incomes). But there are also plausible reasons that the OECD numbers may be under-stated (e.g., re-invested dividends may not get properly counted). Given that the Chinese reported annual <u>inflows</u> were often bigger than the entire <u>stock</u> as

reported by the source countries in the same years, it seems likely that the Chinese figures contain much fat.

In any case, in the interest of using a consistent database, all the subsequent regressions are run using the OECD data. I will, however, discuss the implication of measurement errors on the interpretation of the statistical results.

Corruption measure

By its very nature, corruption is very difficult if not infeasible to measure objectively. Researchers have relied on corruption perception indexes based on surveys of experts or firms. For example, the Business International (BI) index, based on surveys conducted during 1980-83, asked the expert/consultant to rank a country that s/he was working on according to "the degree to which business transactions involve corruption or questionable payments." Mauro (1995) and Wei (1997a) used it to examine the relationship between economic growth and corruption, and FDI and corruption, respectively. Unfortunately, the BI index does not cover China in its sample.

The corruption measure that I use in this paper is a perception index based on a survey of 2827 firms in 58 countries conducted by the World Economic Forum in 1996 for its Global Competitiveness Report 1997. Question 8.02 in the survey asks the respondent to rank the level of corruption in his/her country, on a scale of 1 to 7, according to the extent of "irregular, additional payments connected with imports and exports permits, business licenses, exchange controls, tax assessments, police protection or loan applications." The corruption rating used in this paper is based on the country averages of individual responses. [The original rating is such that a low number implies a high corruption. I have transformed the number so that a big number means a high corruption. New rating = 8 – original rating.]

As a check, we can compare the corruption rating by the GCR index with another widely reported index -- Transparency International (TI) index. TI is an agency dedicated to fight corruption

worldwide. Its index in 1998 is an average of seven surveys of perception of corruption conducted during 1996-98. The correlation between the GCR and TI indexes are …

Regulatory Burden is based on the GCR survey question (Q2.02) that asks the respondents to rank the "pervasiveness" of "administrative regulations that constrain business." [In the original rating, a lower number means more pervasive regulatory burden. With a transformation, the rating used in this paper = 8 –original rating.]

Interest Rate Controls is meant to be a measure of degree of domestic financial repression. It is similarly based on GCR survey question that ask the respondents the degree to which "deposit and lending interest rates I your country are freely determined by the market." I have transformed the index so that the New value = 8 – original value. One hypothesis is that financial repression could promote FDI by lowering the cost of capital. An opposite hypothesis is that financial repression is often associated with rationing of credit (and denial of cheap domestic credits to foreign investors). So it may discourage FDI by raising the cost of capital for foreign investors.

Foreign Exchange Control is derived by adding up twelve possible restrictions on capital account transactions from the back of the IMF's Exchange Arrangements and Exchange Restrictions Annual Report 1997. A possible hypothesis is that foreign exchange control as an impediment to the movement of capital makes it less attractive for foreign director investors to invest.

[Table 5]

Other Data

For host countries' tax rate, I use the marginal corporate income tax (the top bracket). It is also from GCR(1998).

The GDP data comes from the International Monetary Fund's International Financial Statistics data base. In a few cases where GDP data are not available, GNP data are substituted. The wage data are obtained from the International Labor Organization.

The bilateral distance data measures the "greater circle distance" between the economic centers in source-host pairs. The dummy on linguistic tie takes the value of one if the source and host countries share a common language, and zero otherwise. Both data were used in Frankel, Stein and Wei (1995), and are available on Shang-Jin Wei's website: www.nber.org/~wei.

3.2 Econometric Specification

We perform three different specifications. We start with a fixed-effects regression that includes separate dummies for all source countries.

$$\text{Log}(FDI_{jk}) = \underset{\text{fixed effects}}{\text{source country}} + X_{jk}\Gamma + e_{jk}$$

Where β and Γ are scalar and vector parameters, respectively, and X_{jk} is a vector of determinants of bilateral FDI. For example, we start with four control variables.

$X_{jk} = [\log(GDP_k), \log(GDP_k / Population_k), \log(Distance_{jk}), Linguistic\text{-}Tie_{jk}]$

Later on, we will add other control variables including country k's marginal corporate income tax rate (in the highest bracket), its (perceived) level of corruption and extent of regulatory burden. Finally, e_{jk} is assumed to be an iid normally distributed variate with a zero mean.

The above specification assumes that the error term is uncorrelated with each other. If a particular characteristic of host country that is relevant determinant of FDI is missing from the specification, it would induce a host-country-specific component of the error term leading to correlated errors across observations for the same host country. As a second specification, we also implement a random effects regression that assumes a host-specific error term:

$$\text{Log}(FDI_{jk}) = \underset{\text{fixed effects}}{\text{source country}} + X_{jk}\Gamma + u_k + e_{jk}$$

where u_k is host-specific normal variate with zero mean, e_{jk} is the same as before (iid across all observations), and u_k and e_{jk} are uncorrelated from each other.

Some host countries receive no direct investment from certain source countries. A potential drawback of the pervious specifications is that zero FDI observations are dropped by this specification. Therefore, we also implement Tobit version of the fixed-effects regression:

$$\begin{aligned} \text{Log}(FDI_{jk} + A) &= \underset{\text{fixed effects}}{\text{source country}} + X_{jk}\Gamma + e_{jk} && \text{if } FDI_{jk} > 0 \\ &= \ln(A) && \text{if otherwise.} \end{aligned}$$

where A is a constant (set to be 0.1 in the reported tables though alternative values would not make a difference qualitatively), u is an i.i.d. normal variate with mean zero and variance σ^2. In this specification, if $X\beta+u$ exceeds a threshold value, ln(A), source country "j" accumulates a positive stock of investment in host country "k"; otherwise, the realized foreign investment is zero (and the desired level could be negative).

3.3 Regression Results and Interpretation

Basic Findings

The first three columns in Table 6 implements a fixed effects, a random effects, and the Tobit regression on the benchmark specification. Aside from the source country dummies, the list of regressors include marginal tax rate, host country's GDP and per capital GDP, both in logarithmic form[4], log distance between the economic centers of the source and host countries, and a dummy if the

[4] One may prefer to include log(GDP) and log(GDP per capita) instead. The coefficients on these two variables would be a linear combination of the two coefficients on log(GDP) and log(population).

source and the host share a common linguistic tie and a historical colonial tie, and the lagged growth rate of the economy. The last three columns of Table 6 replicates these regressions with the addition of two dummies for China and India as host countries, respectively.

[Table 6]

The coefficient on tax rate is negative and statistically significant, indicating high tax tends to discourage foreign investment. The coefficient on log(GDP) is positive, significant but less than one, suggesting that larger economies receive more FDI, although the increment in FDI is less than proportional to the increment in country size. The coefficient on log(distance) is negative but significant. That on the linguistic dummy is positive, significant and quantitatively large.

The key variables of interest are the dummies for China and India as a host countries for FDI from the major source countries. The coefficients on both variables are –1.02, and statistically significant at the five percent level. In other words, controlling for this list of regressors, China, like India is a significant under-achiever as a host of FDI. The quantitative effect is large. Taking the point estimates on the China dummy and the tax variable literally, one needs to raise the tax rate by 30 percentage points (=1.02/0.037), in order to reduce the inward FDI as much as to explain the negative coefficient on the China (and India) dummy.

Corruption and Other Measures of Public Institutions

In Table 7, we add a set of variables measuring the quality of public institutions. The new variables are corruption, regulatory burden, extent of capital controls, and the extent of domestic financial market repression.

The relative quantitative effect of corruption on FDI is also significant. A one-step worsening in the GCR corruption rating would be equivalent to raising the marginal tax rate by 5 percentage points. An increase in the host country corruption rating from the Singapore level (GCR97 value=1.6) to the

China level (GCR97 index=4.1) has the same effect on inward FDI as raising the tax rate by 12.5 percentage points (=2.5X5). In other words, the (perceived) corruption in China is likely to have significantly discouraged foreign direct investment.

Flow of FDI

As we noted earlier, the welcome mat from the Chinese government for FDI was extended gradually. Plus, China (and India) started with an extraordinarily low level of FDI in the early 1980s. This raises the possibility that China is a super-magnet for FDI as far as recent annual flows are concerned, even if its stock of inward FDI remains low.

Such an argument may not be valid as 20 years of liberalization seems long enough. Nevertheless, in Table 8, we replicate the key regressions in the previous table. There are three noteworthy results. First, we find that both the China and India dummies continue to be negative, implying that China under-performs relative its potential even if one only looks at the inflows. Second, we now see that the gap between actual FDI and potential is much bigger for India than for China. Third, corruption and regulatory burden continue to have a negative effect on inflows of FDI in most regressions, although relative to their (increased) standard errors, the effect is not always statistically significant.

The Hong Kong Connection

It is often remarked that Hong Kong is a mecca for foreign direct investment. It seems possible that, in part because the investors from the major source countries loathe the corruption and red tape situation on the Mainland, they invest heavily in Hong Kong as a stepping stone to or substitute for investing in Mainland China. Indeed, part of the Hong Kong investment in China may have been made on behalf of the investors from the major source countries.

To see if the Hong Kong connection helps to solve the puzzle of China's under-achievement, I redefine all the FDI into Hong Kong from the major source countries as part of the FDI into China from the same source countries, and eliminate Hong Kong as a separate host in the regressions. Furthermore, I do not upgrade the business environment of the Chinese economy towards that of Hong Kong (e.g., reducing the rating on corruption and regulatory burden, which would have raised the potential amount of FDI and hence the gap between the actual and potential FDI). It is important to bear in mind that this is an over-adjustment since a substantially part of FDI into Hong Kong is truly destined for Hong Kong. Nonetheless, it is interesting to see if such a draconian adjustment could turn the China dummy from a significant negative to zero.

The results are reported in Tables 9 and 10. As it turns out, the coefficient on the Hong Kong dummy is now indifferent from zero but continues to be negative. This experiment has a high degree of arbitrariness. It serves to demonstrate that the gap between the actual FDI into China and the potential amount as defined by these regressions is enormous. Furthermore, while the existence of Hong Kong may have helped China to attract FDI from the major source countries, it does not fully compensate for corruption, regulatory burden and other elements of the Chinese environment that have discouraged FDI.

4. Concluding Remarks

While the absolute values of FDI into China in recent years look very impressive, it masks an unusual composition of source countries. A significant fraction (maybe 15%) of Hong Kong investment in China can be "round-tripping" mainland capital in disguise. This should be counted as false-foreign direct investment, and should be deleted from the statistics on FDI into China.

The remaining part of Hong Kong investment in China should be regarded as quasi-foreign direct investment, for Hong Kong has always been a special extension of China even under British rule, and has since July 1, 1997 legally been part of China. Taking out these two parts would reduce the annual flows of FDI into China in recent years by half, and the stock by 60%.

A comparison of FDI into China reported by the official source with that reported by the investing countries generally reveal a big discrepancy. The amount of inward FDI from US, UK, France and others as claimed by China is often two to three times larger than what is reported by the corresponding investing countries. One possible explanation is that the official Chinese statistics on FDI contains serious fat in it.

Using a cross-country data on bilateral stock of FDI from the seventeen most important source countries in the world, one can estimate the potential amount of inward FDI for a host country such as China as a function of its economic and policy characteristics. Compared with the model-predicted potential, China is found to be a significant under-achiever as a host of FDI from the major source countries. The gap is huge. There is evidence to suggest that China's relatively high corruption and regulatory burden discourage FDI by a significant amount.

If we take the estimated point estimates seriously, then, high corruption and regulatory burden has discouraged far more FDI than generous tax giveaway has helped to attract. A positive way to read the same message would be this: China and India have not exhausted their potential as hosts for foreign investment. For the sake of concreteness, let us perform a "thought experiment" on how much China and India's inward FDI could increase if they can reduce their respective corruption and red tape to the same levels as in Singapore.

Reducing corruption to the Singapore level means a reduction in the corruption ratings by 2.5 and 3.5 for China and India, respectively (see Table 11 for details). Similarly, reducing red tape to the Singapore level means a drop in the red tape ratings by 2.5 and 3.12 for China and India, respectively. We take the fixed-effects (linear) regression as our benchmark. The coefficients on corruption and red tape are –0.146 and –0.317, respectively. Therefore, for China, reducing corruption and red tape to the Singapore levels would imply an increase in log(FDI) by 1.158. In other words, the new hypothetical level of FDI into China would be 218% higher than the current level. Similar calculation implies that the FDI into India, if it reduces its corruption and red tape to the Singapore levels, would be 348% higher.

Of course, the calculation here is only meant to be illustrative. Reducing corruption and red tape is easy said than done[5]. In addition, both China and, to some extent, India have received a large amount of FDI in terms of absolute value. Increment in FDI for these economies in response to a given improvement in public governance would probably not be as big as for a smaller host country[6]. Nonetheless, the illustrative calculation suggests the possibility that both China and particularly India could increase their inward FDI dramatically if they manage to improve the quality of their public governance significantly.

5 For a survey on the determinants of corruption, see Wei (1999a), section 3. For a practical entry-point to an anti-corruption strategy, see Wei (1999b).

6 On the other hand, a reduction in corruption and red tape would probably also lead to an improvement in the provision of infrastructure and to faster growth (Mauro, 1995), which could in turn indirectly increase inward FDI.

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Table 1: Evolution of Laws and Regulations on FDI in China and India

	CHINA	INDIA
1979	Law on Chinese-foreign equity joint ventures	
1986	Law on foreign capital enterprises: China permits foreign enterprises, other foreign economic organizations and individuals to set up enterprises with foreign capital in China and protects the lawful rights and interests of such enterprises.	
1988	Law on Chinese-foreign contractual joint ventures	
1990	Interim provisions for the duration of Chinese-foreign equity joint ventures Regulations of the state council for encouraging investment from overseas Chinese and compatriots from Hong Kong and Macao: to encourage investment within the territory of mainland from overseas Chinese and compatriots from Hong Kong and Macao Regulations for contracted operation of Chinese-foreign equity joint ventures. Rules for the implementation of the law on foreign-capital enterprises	
1991	Rules for the implementation of the income tax law for enterprises with foreign investment and foreign enterprises Income tax law for enterprises with foreign investment and foreign enterprises	A new industrial policy provided: Automatic approval for projects with foreign equity participation up to 51% in 35 high priority sectors. All other proposals up to US$ 171 million and 100% equity approved by Foreign Investment Promotion Board (FIPB) or Secretariat of Industrial Approvals (SIA) on a case by case basis. Proposals for investment in excess of the above amount to be approved by the Cabinet Committee on Foreign Investment. Automatic approval of foreign technology agreements up to a lump-sum payment of US$ 2 million net of taxes with 5% royalty on domestic sales and 8% for exports. Foreign investment up to 100% permitted in approved domestic venture capital funds/companies, with FIPB approval and for establishing asset management companies. Liberalization of the Foreign

		Exchange Regulation Act Reduced list of industries requiring industrial licensing Dilution of MRTP Reduction in the number of industries reserved for the public sector Liberalization of imports and reduction in tariffs Convertibility of the Rupee on current account Opening up of the capital market to foreign investors
ENote11 1992		
1994	Law of the People's Republic of China on the protection of investment of Taiwan compatriots: to protect and encourage investment of Taiwan compatriots, and to promote the economic development on both sides of the Straits. Regulations on labor management in enterprises involving overseas investment: to protect the legitimate rights and interests of both foreign-invested enterprises and the employees working in these enterprises and to establish, maintain and develop stable and harmonious work relationship between the enterprises and their staff.	
1995	Detailed rules for the implementation of the law on Chinese-foreign cooperative joint ventures Provisional regulations on the establishment of foreign-funded joint stock companies limited: foreign companies, enterprises and other economic entities or individuals are allowed to jointly set up foreign funded joint stock companies limited in China jointly with Chinese companies, enterprises and other economic entities or individuals, under the principle of mutual benefit. Provisional regulations on investment companies established by foreign investors: foreign investors are permitted to establish investment companies in China in accordance with relevant Chinese laws and regulations concerning foreign investment. Provisions on the establishment of foreign-funded construction enterprises: to meet the needs of opening up, strengthening the management of foreign-funded construction enterprises, and to safeguard the order of the construction market. Implementation measures for the administration on	

	import by foreign-funded enterprises Catalogue for the guidance of foreign investment industries recognizing encouraged projects for foreign investment Interim provisions on guidance for foreign investment: to guide foreign investment, adapt foreign investment to China's national economic and social development programs, and adequately protect the legal rights and interests of investors. Rules on the approval and control of resident representative offices of foreign enterprises: foreign enterprises, when applying to set up resident representative offices within the territory of People's Republic of China, must have the approval of the MOFTEC or its empowered foreign trade and economic cooperation commissions. Detailed Rules on the Implementation of the Law on Sino-Foreign Joint Cooperative Ventures Urgent Notice on Issues Relating to Current Examination and Approval of Enterprises with Foreign Investment	
1996	Regulations on the examination and approval of foreign-funded enterprises serving as agents for international cargo transport: to standardize the work to examine and approve foreign-funded enterprises serving as agents for international cargo transport, and in accordance with State laws and regulations concerning foreign-funded enterprises and the provisions of China on the management of international cargo transport agency business. Procedures for Liquidation of Foreign-Funded Enterprises: to ensure the smooth progress of the process of liquidation of the foreign-funded enterprises(FFEs),protect the rights and interests of the creditors and investors and safeguard the social and economic order related to the liquidation. Circular of the State Council Concerning the Extension of the Limits of Power Vested with the Inland Provinces, Autonomous Regions, Cities Separately Listed in the State Plan and the Departments Concerned Under the State Council in Examining and Approving Direct Foreign Investment Projects Provisional Measures on the Establishment of Sino-Foreign Joint Venture Trading Companies on A Pilot Basis Regulations Concerning the Examination and	

	Approval of International Freight Forwarding Agencies With Foreign Investment: for standardizing the examination and approval of international freight forwarding agencies with foreign investment.	
1997		
1998	Preferential taxation policies for FDI included exemptions from tariffs and import value-added tax for imports of capital goods by foreign-funded high-tech projects and 50% reduction of tariffs and import value-added tax for imports of capital goods by sectors where foreign investment is encouraged.	ENote2Indian companies no longer require prior clearances from the Reserve Bank of India for inward remittances of foreign exchange or for the issuance of shares to foreign investors.ENote3

Notes:

1) Information on rules, regulations and laws for China are obtained from Ministry of Foreign Trade and Economic Cooperation (MOFTEC)
(http://www.moftec.gov.cn/moftec/official/html/laws_and_regulations/foreign_investment.html).

2) Information on rules, regulations and laws for India is from:

http://www.docuweb.ca/India/news/9612.html#S0135

http://www.linktochina.com/Invest/indexinvest.html
http://strategis.ic.gc.ca/SSG/da90887e.html (U.S. Department of Commerce)

Table 2: Realized Foreign Direct Investment in China, India, and Russia
Annual Flows, 1980-1999
(Unit: Billions of U.S. Dollars)

Year	China	India	Russia
1980	0.15	8/ 685.0m rupees	
1981	0.38	10	
1982	0.41	65	
1983	0.64	63	
1984	1.26	62	
1985	1.66	160	
1986	1.88	208	
1987	2.31	181	
1988	3.19	287	
1989	3.39	350	
1990	3.49	97/ 173.6 Rs.crore	0[4]
1991	4.37	136	0[4]
1992	11.00	258	700[1]
1993	27.52	569	700[1]
1994	33.77	946	600 [3]
1995	37.52	1930	1876.9[2]
1996	41.73	2420	2090.0[2]
1997	45.28	3050	3897.3[2]
1998	45.58	3000	
1999 (estimate)	37.13		

Sources: China: 1) 1980-1982: *World Investment Directory 1992*.
2) 1983-1996: China State Statistics Bureau.
3) 1997-1999: MOFTEC Statistics Data. 1999 estimate = $18.566b (Jan-June) X 2.

India: 1) 1980-90, 98: The World Bank.
2) 1980 in Rs.Crores: *World Investment Directory 1992*.
3) 1990 in Rs.Crores: Statistical Abstract India 1997.
4) 1991-1997: http://strategis.ic.gc.ca/SSG/da90893e.html based on data provided by the Reserve Bank of India.

Russia: 1) *World Investment Report 1998: Trends and Determinants* (data from UNCTAD, FDI/TNC database).
2) http://russia.shaps.hawaii.edu/economic/russia-dfi.html based on data from Russian State Statistical Committee.
3) *Statistical Handbook 1996*, States of Former USSR.
4) *Global Development Finance 1999*

Table 3. Source Country Distribution of Foreign Direct Investment in China

(Flow data in millions of U.S. Dollars)

Country	DFI1990	DFI 1991	DFI 1992	DFI 1993	DFI 1994	DFI 1995	DFI 1996	DFI 1997
Total	3487.11	4366.34	11007.51	27514.95	33766.50	37520.53	41725.52	45257.04
Hong Kong	1880.00	2405.25	7507.07	17274.75	19665.44	20060.37	20677.32	20632.00
Japan	503.38	532.50	709.83	1324.10	2075.29	3108.46	3679.35	4326.47
USA	455.99	323.20	511.05	2063.12	2490.80	3083.01	3443.33	3239.15
Germany	64.25	161.12	88.57	56.25	258.99	386.35	518.31	992.63
Macao	33.42	81.62	202.00	586.50	509.37	439.82	580.39	394.55
Singapore	50.43	58.21	122.31	490.04	1179.61	1851.22	2243.56	2606.41
UK	13.33	35.39	38.33	220.51	688.84	914.14	1300.73	1857.56
Italy	4.10	28.21	20.69	99.89	206.16	263.31	166.94	215.04
Thailand	6.72	19.62	83.03	233.18	234.87	288.24	323.31	194.00
Australia	24.87	14.91	35.03	109.96	188.26	232.99	193.92	313.74
Switzerland	1.48	12.31	29.14	41.02	70.54	63.53	187.61	215.67
Canada	8.04	10.76	58.24	136.88	216.05	257.02	337.93	344.12
France	21.06	9.88	44.93	141.41	192.04	287.02	423.75	474.65
Bermuda	---	8.00	0.29	18.53	50.74	109.14	86.12	104.89
Netherlands	15.98	6.67	28.41	84.00	111.05	114.11	125.11	413.80
Norway	2.23	6.05	5.06	1.34	2.31	1.53	26.79	6.46

Philippines	1.67	5.85	16.28	122.50	140.40	105.78	55.51	155.63
Panama	6.76	3.56	8.19	14.84	18.30	15.66	15.47	7.547
Ireland	---	2.50	1.00	1.50	---	0.99	10.03	0.3
Indonesia	1.00	2.18	20.17	65.75	115.70	111.63	93.54	79.98
Malaysia	0.64	1.96	24.67	91.42	200.99	259.00	459.95	381.83

Source: China Ministry of Foreign Economic Relations and Trade (various issues). *Almanac of China's Foreign Economic Relations and Trade 97/98* (for 1997).

Table 4. FDI Flow into China
Chinese vs. Source Country Statistics

Country	DFI 1990	DFI 1991	DFI 1992	DFI 1993	DFI 1994	DFI 1995	DFI 1996	DFI 1997	Units
USA (OECD report)	30	40	74	556	1232	261	941	1217[p]	Million US$
USA (Chinese report)	455.99	323.20	511.05	2063.12	2490.80	3083.01	3443.33	3239.15	Million US$
Japan (OECD report)	349	579	1070	1691	2565	3834	2599 / 282800 m yen	.	Million US$
Japan (Chinese report)	503.38	532.50	709.83	1324.10	2075.29	3108.46	3679.35	4326.47	Million US$
Germany (OECD report)	.	115	233	112	483	630	1145	1230[p]	Million DM
Germany (OECD in US$)	.	75.86	144	64.88	304.11	437.39	763.33	723.53	Million US$
Germany (Chinese report)	64.25	161.12	88.57	56.25	258.99	386.35	518.31	992.63	Million US$
UK (OECD report)	.	17	20	21	8	51	211	.	Million
UK (OECD in US$)	.	31.80	30.24	31.11	12.5	83.7	351.67	.	Million US$
UK (Chinese report)	13.33	35.39	38.33	220.51	688.84	914.14	1300.73	1857.56	Million US$
France (OECD report)	-11	463	296	505	607	743	1280	1313[p]	Million Francs

France (OECD in US$)	-2.14	89.38	53.75	85.66	113.54	141.43	250.98	226.38	Million US$
France (Chinese report)	21.06	9.88	44.93	141.41	192.04	287.02	423.75	474.65	Million US$
Australia (OECD report)	.	.	.	16	50	33	.	.	Million Aus$
Australia (OECD in US$)	.	.	.	10.83	38.84	24.59	.	.	Million US$
Australia (Chinese report)	24.87	14.91	35.03	109.96	188.26	232.99			Million US$
Italy (OECD report)	.	.	24	4	33	51	136	197p	Billion Lires
Italy (OECD in US$)	.	.	19.48	2.55	20.46	31.31	88.14	115.69	Million US$
Italy (Chinese report)	4.10	28.21	20.69	99.89	206.16	263.31	166.94	215.04	Million US$
Netherlands (OECD report)	.	12	-56	-30	332	169	500	.	Million Guilders
Netherlands (OECD in US$)	.	6.32	-31.11	-15.79	184.44	105.63	294.12	.	Million US$
Netherlands (Chinese report)	15.98	6.67	28.41	84.00	111.05	114.11	125.11	413.80	Million US$
Switzerland (OECD report)	.	.	.	32	168	342	368	247[p]	Million SF
Switzerland (OECD in US$)	.	.	.	21.33	120	285	306.67	164.67	Million US$

Switzerland (Chinese report)	1.48	12.31	29.14	41.02	70.54	63.53	187.61	215.67	Million US$

Sources:

1. OECD statistic: *International Direct Investment Statistics Yearbook 1998* (except Australia).
2. Chinese statistic: see sources for Table 2.

Notes:

1. p denotes provisional statistic.
2. Yearly average exchange rates are used for yen/US$ conversion for 1996.

Table 5 Business Environment in Selected Countries

host country	gdppc96	grow9094	corporati tax	corruptio gcr97[1]	corruptio gcr98	corruptio TI index	Regulator Burden	capital control	interest rate
Canada	19370	0.05	38	1.7	1.56	0.8	3.44	1	2.31
China	**631**	**0.47**	**30**	**4.1**	**4.82**	**6.5**	**4.58**	**11**	**6.01**
Colombia	2092	0.17	35	5.1	4.87	7.8	4.79	10	3.41
France	26692	0.03	33	2.6	2.18	3.3	4.97	4	2.91
Germany	29869	.	45	2	1.61	2.1	4.33	2	1.95
Hong Kong	23054	0.22	16.5	1.8	3.88	2.2	2.15	0	2.65
India	**413**	**0.18**	**40**	**5.1**	**5.21**	**7.1**	**5.1**	**12**	**4.45**
Indonesia	1105	0.30	30	5.5	5.93	8	5.27	9	3.87
Japan	42295	0.06	37.5	2.2	2.00	4.2	4.62	3	3.64
Korea	10728	0.28	30	4.3	4.00	5.8	4.96	10	4.27
Malaysia	4488	0.33	30	4	3.67	4.7	3.63	11	4.15
Mexico	3245	0.14	34	4.4	4.22	6.7	4.67	8	3.56
Philippines	1092	0.06	35	5.5	5.65	6.7	4.1	9	2.58
Russia	2271	-0.43	38	5.3	5.05	7.6	4.8	10	4.37
Singapore	29894	0.33	26	1.6	1.56	0.9	2.08	1	2.96
Taiwan	12861	0.26	25	3.3	2.62	5.3	3.34	.	2.84
Thailand	2957	0.33	30	5.5	4.42	7	4.25	9	4.83
United Kingdom	19263	0.04	24	1.5	1.47	1.3	2.89	1	2.5
United States	27471	0.08	35	1.9	1.74	2.5	3.78	3	2.16

1. The one used in regressions.

2. Sources: GDP, GDP per capita from World Bank/WDI; others from GCR

Table 6: China as a FDI as Compared With Its Potential

Dependent variable log of FDI stock[1]	Fixed[4] effects OLS	Fixed[4] effects Tobit	Random[5] effects	Fixed effects OLS	Fixed effects Tobit	Random effects
China				-1.021**	-1.070**	-1.522*
				(0.461)	(0.543)	(0.821)
India				-1.018**	-1.421**	-1.184#
				(0.472)	(0.548)	(0.803)
log (GDP)[2]	0.829**	0.961**	0.909**	0.885**	1.023**	0.978**
	(0.052)	(0.060)	(0.084)	(0.056)	(0.064)	(0.092)
log (Per Capita GDP)[2]	0.209**	0.144**	0.134#	0.095	0.010	0.000
	(0.056)	(0.065)	(0.092)	(0.070)	(0.080)	(0.113)
log (distance)	-0.654**	-0.835**	-0.930**	-0.692**	-0.876**	-0.961**
	(0.072)	(0.084)	(0.076)	(0.073)	(0.085)	(0.076)
linguistic tie	1.609**	1.910**	1.091**	1.626**	1.938**	1.068**
	(0.220)	(0.258)	(0.202)	(0.220)	(0.258)	(0.201)
lagged growth rate	0.536#	0.981**	1.297**	0.844**	1.306**	1.674**
	(0.368)	(0.430)	(0.582)	(0.388)	(0.451)	(0.625)
corporate tax rate	-0.037**	-0.029**	-0.036**	-0.038**	-0.028**	-0.037**
	(0.009)	(0.010)	(0.014)	(0.009)	(0.010)	(0.015)
No. of Obs.	580	620	580	580	620	580
R2[6]	0.72	0.26	0.72	0.72	0.26	0.73

**5% significant, *10% significant, #15% significant. Standard errors in parentheses.
1. FDI stock: average of FDI stock 94-96.
2. GDP = average GDP 94-96 if dependent variable is log FDI stock;
GDP = average GDP 90-95 if dependent variable is log FDI flow.
3. Log(GDP94)-log(GDP90) if dependent variable is log FDI stock;
Log(GDP90)-log(GDP85) if dependent variable is log FDI flow;
4. Y(i,j) = a(i) + BX(i,j) + e(i, j), where i is source index and j is host index.
All regressions include a source country dummy. Not reported to save space.
5. Y(i,j) = source dummy + BX(i,j) + e(i, j)
6. Adjusted R2 for fixed effects, overall R2 for random effect, and psedo R2 for tobit.

Table 7: Additing Public Policies and Public Institutions

Dependent variable log of FDI stock	Fixed effect OLS	Fixed effect Tobit	Random effect	Fixed effect OLS	Fixed effect Tobit	Random effect
China				-1.314**	-1.660**	-1.458#
				(0.508)	(0.593)	(0.894)
India				-1.567**	-2.034**	-1.580**
				(0.458)	(0.528)	(0.786)
log (GDP)	1.022**	1.155**	1.108**	1.086**	1.230**	1.169**
	(0.059)	(0.068)	(0.094)	(0.061)	(0.069)	(0.100)
log (Per Capita GDP)	-0.043	-0.140	-0.037	-0.282**	-0.441**	-0.257
	(0.100)	(0.115)	(0.159)	(0.118)	(0.136)	(0.190)
log (distance)	-0.780**	-0.950**	-1.003**	-0.812**	-0.985**	-1.021**
	(0.077)	(0.089)	(0.078)	(0.076)	(0.088)	(0.078)
linguistic tie	1.313**	1.592**	0.994**	1.305**	1.579**	0.979**
	(0.219)	(0.256)	(0.204)	(0.219)	(0.254)	(0.203)
lagged growth rate	0.446	0.693#	1.008*	0.763**	1.083**	1.327**
	(0.373)	(0.433)	(0.611)	(0.382)	(0.442)	(0.645)
corporate tax rate	-0.028**	-0.018*	-0.028*	-0.027**	-0.017*	-0.027*
	(0.009)	(0.010)	(0.015)	(0.009)	(0.010)	(0.015)
corruption	-0.050	-0.058	-0.031	-0.146*	-0.174*	-0.112
	(0.081)	(0.094)	(0.128)	(0.087)	(0.099)	(0.138)
administrative regulations	-0.302**	-0.374**	-0.283#	-0.317**	-0.395**	-0.315#
	(0.113)	(0.131)	(0.189)	(0.112)	(0.129)	(0.195)
capital controls	0.008	-0.029	0.017	-0.006	-0.048#	0.005
	(0.027)	(0.031)	(0.043)	(0.027)	(0.031)	(0.045)
interest rate control	-0.391**	-0.289**	-0.457**	-0.309**	-0.186#	-0.367**
	(0.102)	(0.118)	(0.167)	(0.111)	(0.128)	(0.187)
OECD	-0.647**	-0.771**	-0.894**	-0.594**	-0.694**	-0.810**
	(0.190)	(0.219)	(0.294)	(0.189)	(0.218)	(0.305)
No. of Obs.	570	608	570	570	608	570
R2	0.75	0.28	0.76	0.75	0.28	0.76

Table 8: Inflow of FDI

Dependent variable log of FDI flow	Fixed effect OLS	Fixed effect Tobit	Random effect	Fixed effect OLS	Fixed effect Tobit	Random effect
China				-1.325#	-1.636#	-0.949
				(0.830)	(0.993)	(1.310)
India				-2.068**	-2.400**	-1.715#
				(0.680)	(0.813)	(1.120)
log (GDP)	0.791**	0.951**	0.870**	0.851**	1.017**	0.925**
	(0.083)	(0.097)	(0.142)	(0.084)	(0.099)	(0.150)
log (Per Capita GDP)	-0.026	-0.235	-0.067	-0.373*	-0.646**	-0.298
	(0.160)	(0.188)	(0.244)	(0.204)	(0.240)	(0.303)
log (distance)	-0.865**	-0.955**	-0.868**	-0.876**	-0.965**	-0.872**
	(0.100)	(0.118)	(0.102)	(0.099)	(0.116)	(0.102)
linguistic tie	0.897**	1.017**	0.828**	0.964**	1.080**	0.841**
	(0.273)	(0.321)	(0.263)	(0.273)	(0.321)	(0.264)
lagged growth	1.044	1.986**	1.196	1.150	2.102**	1.325
	(0.840)	(0.998)	(1.371)	(0.830)	(0.984)	(1.397)
corporate tax rate	-0.020*	-0.026*	-0.031#	-0.020*	-0.025*	-0.030#
	(0.011)	(0.014)	(0.020)	(0.011)	(0.013)	(0.021)
corruption	-0.061	0.060	0.009	-0.227#	-0.139	-0.077
	(0.128)	(0.151)	(0.199)	(0.145)	(0.172)	(0.218)
administrative regulations	-0.234#	-0.342*	-0.230	-0.169	-0.265	-0.226
	(0.160)	(0.190)	(0.282)	(0.159)	(0.189)	(0.288)
capital controls	0.027	-0.032	0.016	-0.001	-0.067	0.001
	(0.041)	(0.048)	(0.064)	(0.042)	(0.049)	(0.067)
interest rate control	-0.242*	-0.349**	-0.311	-0.178	-0.264	-0.268
	(0.147)	(0.174)	(0.244)	(0.159)	(0.189)	(0.274)
OECD	-0.728**	-0.607*	-0.687#	-0.747**	-0.622*	-0.663#
	(0.288)	(0.338)	(0.426)	(0.284)	(0.332)	(0.433)
No. of Obs.	267	274	267	267	274	267
R2	0.66	0.21	0.69	0.67	0.22	0.70

Table 9: Hong Kong Connection for FDI Stock

Dependent variable log of FDI stock	Fixed effects	Fixed effects	Random effects

	OLS	Tobit	
China	0.087	-0.650	-0.056
	(0.518)	(0.604)	(0.917)
India	-1.542**	-2.018**	-1.567*
	(0.461)	(0.538)	(0.803)
log (GDP)	1.087**	1.233**	1.173**
	(0.061)	(0.071)	(0.102)
log (Per Capita GDP)	-0.287**	-0.442**	-0.261
	(0.119)	(0.138)	(0.193)
log (distance)	-0.818**	-0.971**	-1.039**
	(0.077)	(0.090)	(0.079)
linguistic tie	1.239**	1.554**	0.882**
	(0.224)	(0.263)	(0.208)
lagged growth rate	0.742*	1.039**	1.348**
	(0.387)	(0.452)	(0.661)
corporate tax rate	-0.029**	-0.018*	-0.028*
	(0.009)	(0.010)	(0.016)
corruption	-0.147*	-0.179*	-0.115
	(0.087)	(0.101)	(0.140)
administrative regulations	-0.328**	-0.409**	-0.316#
	(0.115)	(0.134)	(0.203)
capital controls	-0.010	-0.051#	0.005
	(0.028)	(0.033)	(0.048)
interest rate control	-0.299**	-0.174	-0.367*
	(0.113)	(0.132)	(0.194)
OECD	-0.623**	-0.705**	-0.830**
	(0.194)	(0.227)	(0.320)
No. of Obs.	555	593	555
R2	0.75	0.28	0.76

Table 10: Hong Kong Connection for FDI Flow

Dependent variable log of FDI flow	Fixed effect OLS	Fixed effect Tobit	Random effect	Fixed effect OLS	Fixed effect Tobit	Random effect
China	-0.615	-0.678	-0.345	-0.339	-0.672	0.024

	(0.705)	(0.745)	(1.029)	(0.828)	(0.992)	(1.327)
India	-0.971*	-1.041*	-0.758	-2.058**	-2.416**	-1.696#
	(0.588)	(0.621)	(0.878)	(0.677)	(0.810)	(1.132)
log (FDI90)	0.487**	0.495**	0.498**			
	(0.051)	(0.054)	(0.053)			
log (GDP)	0.263**	0.298**	0.286**	0.855**	1.021**	0.936**
	(0.094)	(0.100)	(0.134)	(0.084)	(0.098)	(0.151)
log (Per Capita GDP)	-0.223	-0.442**	-0.202	-0.376*	-0.657**	-0.305
	(0.174)	(0.181)	(0.241)	(0.203)	(0.239)	(0.305)
log (distance)	-0.480**	-0.438**	-0.446**	-0.883**	-0.961**	-0.889**
	(0.095)	(0.100)	(0.099)	(0.099)	(0.116)	(0.102)
linguistic tie	0.221	0.009	0.203	0.856**	0.957**	0.682**
	(0.245)	(0.258)	(0.236)	(0.277)	(0.325)	(0.266)
lagged growth	-0.314	-0.203	-0.358	1.183	2.056**	1.320
	(0.738)	(0.779)	(1.113)	(0.835)	(0.993)	(1.425)
corporate tax rate	-0.005	-0.010	-0.010	-0.021*	-0.026*	-0.031#
	(0.010)	(0.010)	(0.016)	(0.011)	(0.014)	(0.021)
corruption	-0.220*	-0.196#	-0.105	-0.239*	-0.161	-0.094
	(0.124)	(0.131)	(0.173)	(0.145)	(0.172)	(0.220)
administrative regulations	-0.122	-0.144	-0.194	-0.190	-0.277#	-0.246
	(0.138)	(0.146)	(0.227)	(0.161)	(0.191)	(0.297)
capital controls	0.053	0.016	0.052	-0.008	-0.072	-0.003
	(0.037)	(0.039)	(0.055)	(0.043)	(0.051)	(0.071)
interest rate control	0.159	0.062	0.111	-0.155	-0.242	-0.250
	(0.142)	(0.149)	(0.219)	(0.160)	(0.190)	(0.280)
OECD	-0.008	0.217	0.171	-0.808**	-0.662*	-0.725#
	(0.264)	(0.277)	(0.363)	(0.289)	(0.339)	(0.445)
No. of Obs.	252	253	252	259	266	259
R2	0.75	0.30	0.77	0.68	0.23	0.70
Breusch and Pagan test p-value			0.00			0
Hausman specification test p-value			1.00			0.29

Table 11: Increment in FDI as a Result of Reducing Corruption and Red Tape

	China	India
"Experiment"		
Reducing corruption to Singapore level	4.1-1.6 = **2.5**	5.1-1.6 = **3.5**
Reducing red tape to Singapore level	4.58-2.08 = **2.5**	5.1-2.08 = **3.12**
"Outcome"		
Increment in log(FDI)	2.5X0.146 +2.5X 0.317 = **1.158**	3.5X0.146+3.12X0.317 = **1.50**
Percentage Increase in FDI [FDi(new) / FDI(current) – 1]	exp{1.158} – 1 = **218%**	exp{1.50} - 1 = **348%**

Notes:
(1) FDI(new) = hypothetical new level of FDI if the country could manage to reduce corruption and red tape to the corresponding Singapore levels.
(2) Calculation based on the fixed effects linear regression (Table 7) in which the point estimates on corruption and red tape are –0.146 and –0.317, respectively.