We are indebted to the research support provided by the BIS and BBVA. Early results from this project were first presented at a BIS seminar, September 21, 2007. We appreciate very constructive comments from the participants of the seminar. All remaining errors are ours. Results and interpretations contained in this paper represent the views of the authors alone and do not necessarily reflect the views and opinions of BBVA or the BIS.
Abstract

In this paper, we examine the determinants of Indian and Chinese FDI outflows. There are three sets of results. First, Chinese investment is attracted to more corrupt countries, while India is attracted to economies with better rule of law. Further analysis suggests that our result of China investing in more corrupt destinations is mostly driven by Chinese investment in the sub-sample of African countries. While we do not conduct economic welfare analysis, several studies in the literature reported that China’s investment in Africa contributed to increased Asia-Africa trade and narrowing of the infrastructure deficits of the sub-Saharan African economies. Second, Chinese FDI is going to economies which are larger but poorer. Indian FDI is going to smaller but richer host countries. Lastly, both India and China seem to be investing in economies to seek fuels. There is also some evidence that they are investing to acquire technology. Exchange rates do not play a major role in affecting Indian or Chinese investment.
1. Introduction

In recent years, the remarkable growth of both China and India has attracted increasing attention from academics as well as policymakers. Measured by the market exchange rates, the gross domestic product (GDP) of China reached US$5.0 trillion in 2009, while the GDP of India was estimated to be US$1.2 trillion in the same year.\(^1\) As these two Asian economic giants grow, their inward foreign direct investment has also increased substantially.

But a more interesting trend has caught the attention of academics in the last few years. Instead of analyzing FDI inflows, researchers are more and more interested in examining the surge of *outflows* from both China and India. In recent years, there have been several much publicized overseas acquisitions by Chinese companies. For example, in December 2004, the Lenovo Group purchased the personal computer unit of IBM for US$1.25 billion (Wong and Zhou, 2009). In June and December 2007, China Investment Corporation purchased shares from the Blackstone Group and acquired 9.9% of Morgan Stanley, respectively (Wong and Zhou 2009). But despite such increases in purchased assets abroad, there are indications that the future outflows from both China and India will likely increase at an even more robust pace.

A recent report by UNCTAD (2006) calculated the outward FDI performance index of a large number of economies. The index measures the world’s share of a country’s outward FDI as a ratio of its share in world GDP. Several developing Asian economies such as Hong Kong, Singapore and Malaysia have seen their outward FDI performance

\(^1\) There have been a lot of debates concerning the accuracies of the Chinese GDP figures. For a recent reference, see Wu (2007).
indices increased significantly between the periods 1992-1995 and 2003-2005. But for India, there was only a modest rise in the index between the two periods, while for China, the index actually declines. What that may imply is that while the absolute amount of FDI outflows from these large Asian countries have gone up significantly, the values of their GDP have gone up so much more rapidly that the performance indices have actually increased only mildly or actually declined. Furthermore, the performance indices of these two economies remain substantially below one, with India being 0.04 and China 0.09.2

If we use the performance indices as rough indications of the future trends of the outflows from these economies, then we should expect that with regards to the future outward FDI from these economies, more will be expected to flow from China and India.3 The future quantitative and qualitative impact of FDI outflows on other economies will likely to be increasingly high.

In this paper, we will conduct empirical studies of the determinants of Indian and Chinese FDI outflows to various destinations. Specifically we would like to examine and compare the various hypotheses concerning such outflows. There are three sets of factors that we consider. The first set of factors is derived from the often discussed particular perceived needs of the Indian and Chinese economies. Both India and China need resources to fuel their rapid industrializations. So they are expected to invest abroad to extract resources. We construct variables to test this natural resource hypothesis.

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2 Clearly, these performance indices are used here for illustrative purposes only. They are not rigorous measures for the future trends of FDI outflows from China and India.

3 Of course, from a macroeconomic perspective, the net outflows of capital from an economy depend on the domestic saving and investment conditions. From a more micro perspective, FDI outflows can be related to a whole host of conditions in the host economies. These conditions include the sizes of the host economies as well as the wage rates, etc. For a recent study related to determinants of FDI flowing to various provinces of China, see Fung, Garcia-Herrero, Iizaka and Siu (2005). We are only using the outward performance indices here only as very rough indicators of the future trends. Related work by Cheng and Ma (2007) use the past experiences of other East Asian economies such as Japan to show the likely future increase of Chinese FDI outflows.
Both India and China are also seen to be getting technology from abroad by acquiring foreign high-technology companies. We will test this technology-acquisition hypothesis.\(^4\)

The second set of factors concern the characteristics of the host economies. There host economies’ features include the quality of the institutions, openness and capital controls of the host countries. Recent literature on FDI and economic growth has paid particular attention to the effects of institutional factors (Acemoglu, Johnson and Robinson 2001, Wei 2000, Fung, Garcia-Herrero, Iizaka and Siu 2005). In our analysis, we will pay particular attention to our indices of corruption and law and order.

The last set of factors concern the macroeconomic characteristics of the Chinese and Indian economies. These include the GDPs of India and China as well as the bilateral exchange rates between the Chinese yuan and the Indian rupee with the currencies of the host countries.

Our methodology is to use a standard gravity model to estimate the Chinese and Indian capital outflows. Chinese FDI is run from 1991-2008, while for India, the FDI data is much shorter, from 1996 to 2008. The basic gravity model includes host countries’ GDP, GDP per capita, distance and a dummy for contiguous border with India or China. We then augment the basic gravity model to test the hypotheses associated with the particular needs of China and India. We also augment the gravity model with the host country’s characteristics and the macroeconomic features associated with China and India.

\(^4\) In our earlier paper, we also include an index of the outsourcing or supply chain hypothesis. Regression results were not significant with respect to this hypothesis. India may be heavily involved in service outsourcing, particularly in high-technology. However, India seems not to be a part of the production network that involves manufacturing parts and components.
There is a small but growing literature on the formal empirical study of the
determinants of Chinese FDI outflows, including Cheng and Ma (2007), Buckley et.al.
(2007), and Cheung and Qian (2009). We provide several contributions in this paper.
First, our paper is the first that we are aware of to contrast and compare the various
determinants of FDI outflows from the two large emerging countries in Asia—India and
China. In particular, we show that Chinese investment tends to go to more corrupt
economies, while Indian investment is higher in economies with a better system of law
and order.5

Second, our paper systematically tests the various hypotheses associated with
China- and India-specific needs at this stage of their economic development. Lastly, in
addition to institutional factors, we are also able to estimate the importance of various
host countries’ characteristics within the pattern of Indian and Chinese investment abroad.

In the next section, we will discuss our basic econometric exercises. In section 3,
we present our results and our interpretations. In section 4, we conclude.

2. Empirical Methodology

The basic methodology is to first estimate the Chinese and Indian FDI outflows to
various economies by the standard gravity model. While there is very little literature
addressing the theoretical foundation of this model in assessing FDI, there is an emerging
attempt to provide a theoretical model linking the gravity model to FDI flows (see e.g.

5 In one of the specifications by Buckley et.al., 2007, they also show that China’s investment for the years
1984-2001 is going to riskier destinations. However, the paper did not separate out the corruption index
from the total political risk index. We believe that focusing on the corruption index is critical, given that
there is a large literature linking FDI to lower corruption (see, e.g. Wei 2000). Furthermore, the
significance of the political risk index disappears in their paper once they run their regressions separately
for OECD and Non-OECD countries.
Berstrand and Eggard 2007). In addition, the gravity model has been widely employed in the empirical literature of FDI (Eichengreen and Tong 2007, Cheng and Ma 2007). We augment the basic gravity model with the host economies’ characteristics, with the three hypothesized needs of India and China at this juncture of their economic development and with the macroeconomic features of China and India. The augmented gravity model regression equation becomes:

\[
\ln FDI_{eit} = \beta_1 \ln GDP_{it} + \beta_2 \ln PGDP_{it} + \beta_3 \ln D_{ei} + \beta_4 B_{ei} + \\
\beta_5 \ln GDP_{et} + \beta_6 \ln BX_{eit} + \\
\beta_7 \ln(GDP_{it} + PGDP_{it}) + \beta_8 FTA_{eit} + \beta_{10} Kc_{it} + \\
\beta_{11} \ln IMP_{it} + \beta_{12} \ln EXP_{it} + \beta_{13} \ln OS_{it} + \beta_{14} \ln RD_{it} + \beta_{15} \ln IT_{it} + \\
\beta_{16} \ln GDP_{et} + \beta_{17} \ln BX_{eit}
\]  

\(1\)

\(FDI_{eit}\): foreign direct investment outflows from an emerging economy \(e\) (China or India) to host economy \(i\) in year \(t\)

\(GDP_{it}\): gross domestic product of the host economy \(i\) in year \(t\)

\(PGDP_{it}\): per capita gross domestic product of the host economy \(i\) in year \(t\)

\(D_{ei}\): the distance between the emerging economy \(e\) (China or India) and the host economy \(i\)

\(B_{ei}\): a dummy variable denoting border sharing between the emerging economy \(e\) (China or India) and host economy \(i\)

\(Cr_{it}\): the corruption index of host economy \(i\) in year \(t\)

\(LW_{it}\): the index for law and order of host economy \(i\) in year \(t\)

\(IMP+EXP_{it}\): total trade as a proportion of GDP in host economy \(i\) in year \(t\)

\(FTA_{eit}\): a dummy variable denoting the existence of a free trade agreement between emerging economy \(e\) (China or India) and host economy \(i\) in...
In equation (1), the first line with the four variables (GDP, per capital GDP, distance and contiguous border) forms the core gravity model. The second line forms the host economies’ characteristics (the rule of law and corruption indices represent institutional quality, total trade share and free trade agreement represent openness, and capital control is a policy variable). The third line presents the three hypotheses of the perceived needs of China and India. Shares of food, fuel and ores and metals exports represent the natural resource acquisition hypothesis. Research and development spending as well as IT expenditure denote the technology acquisition hypothesis. While the exports of electrical machinery from China test the hypothesis of Chinese FDI facilitating its supply chain. The last line of equation (1) captures the domestic macroeconomic features (their GDP and the bilateral exchange rates) of China and India.
Regressions are run with weighted least squares. Sources of the data are listed in the appendix.

3. Empirical Results

Tables 1 and Table 2 show the regression results for China and India, respectively.
<table>
<thead>
<tr>
<th>Table 1: Chinese FDI 1991-2008</th>
<th>Gravity</th>
<th>Institutions</th>
<th>Openness</th>
<th>Exchange Rate</th>
<th>Capital Controls</th>
<th>Natural Resource</th>
<th>Home Market</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log of GDP</td>
<td>0.24***</td>
<td>0.21***</td>
<td>0.34***</td>
<td>0.22***</td>
<td>0.18***</td>
<td>0.24***</td>
<td>0.23***</td>
<td>0.92***</td>
</tr>
<tr>
<td></td>
<td>(5.57)</td>
<td>(4.06)</td>
<td>(3.32)</td>
<td>(5.39)</td>
<td>(7.03)</td>
<td>(6.38)</td>
<td>(7.72)</td>
<td>(8.42)</td>
</tr>
<tr>
<td>Log of per capita GDP</td>
<td>0.10</td>
<td>-0.02</td>
<td>-0.35**</td>
<td>-0.01</td>
<td>-0.08**</td>
<td>-0.20***</td>
<td>-0.07</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(-1.41)</td>
<td>(-0.57)</td>
<td>(-2.50)</td>
<td>(-0.10)</td>
<td>(-2.11)</td>
<td>(-3.84)</td>
<td>(-1.59)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>Log of distance</td>
<td>0.31***</td>
<td>-0.18**</td>
<td>-0.30</td>
<td>-0.26***</td>
<td>-0.36***</td>
<td>0.02</td>
<td>-0.38***</td>
<td>-0.57***</td>
</tr>
<tr>
<td></td>
<td>(-3.27)</td>
<td>(-2.08)</td>
<td>(-1.42)</td>
<td>(-3.10)</td>
<td>(-3.52)</td>
<td>(0.20)</td>
<td>(-4.67)</td>
<td>(-3.82)</td>
</tr>
<tr>
<td>Border</td>
<td>1.00***</td>
<td>0.81***</td>
<td>-0.18</td>
<td>0.96***</td>
<td>0.82***</td>
<td>1.46***</td>
<td>0.84***</td>
<td>3.04***</td>
</tr>
<tr>
<td></td>
<td>(4.62)</td>
<td>(2.77)</td>
<td>(-0.51)</td>
<td>(4.30)</td>
<td>(4.05)</td>
<td>(6.52)</td>
<td>(4.59)</td>
<td>(5.49)</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.11**</td>
<td>(-2.27)</td>
<td>(0.07*)</td>
<td>(1.90)</td>
<td></td>
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<td>Law and order</td>
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<td>(-0.53)</td>
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<td>Bilateral exchange rate</td>
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<td>Share of fuel in total exports</td>
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<tr>
<td>Share of food in total exports</td>
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<tr>
<td>Share of ores and metals in total exports</td>
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<tr>
<td>Share of electrical machinery in total exports</td>
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<tr>
<td>Log of China GDP</td>
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<td></td>
<td>2.24***</td>
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<td></td>
<td></td>
<td></td>
<td>(24.64)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D expenditure</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.47***</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>(-17.34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT expenditure</td>
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<td></td>
<td></td>
<td></td>
<td>1.13***</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMP+EXP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.16</td>
<td>(-0.39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.21***</td>
<td>(2.20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital control on FDI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.10</td>
<td>(-1.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>974</td>
<td>509</td>
<td>481</td>
<td>945</td>
<td>602</td>
<td>755</td>
<td>974</td>
<td>131</td>
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<tr>
<td>R²</td>
<td>0.28</td>
<td>0.10</td>
<td>0.12</td>
<td>0.29</td>
<td>0.19</td>
<td>0.42</td>
<td>0.48</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Note: ***, **, and * denotes significance level at the 1%, 5%, and 10% level, respectively.
<table>
<thead>
<tr>
<th>Table2 Indian FDI 1996-2008</th>
<th>Gravity</th>
<th>Institutions</th>
<th>Openness</th>
<th>Exchange Rate</th>
<th>Capital Controls</th>
<th>Natural Resource</th>
<th>Home Market</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log of GDP00</td>
<td>-0.20** (-2.26)</td>
<td>0.03 (0.23)</td>
<td>-0.23 (-1.02)</td>
<td>-0.05 (-0.63)</td>
<td>-0.18*** (-4.83)</td>
<td>-0.53*** (-3.13)</td>
<td>-0.19** (-2.26)</td>
<td>-0.54 (-0.88)</td>
</tr>
<tr>
<td>Log of per capita GDP00</td>
<td>0.60*** (5.98)</td>
<td>0.11 (0.61)</td>
<td>0.46* (1.79)</td>
<td>0.30** (2.54)</td>
<td>0.41*** (5.67)</td>
<td>1.10*** (7.27)</td>
<td>0.60*** (6.16)</td>
<td>-0.59 (-0.63)</td>
</tr>
<tr>
<td>Log of distance</td>
<td>0.67** (2.58)</td>
<td>-0.36 (-1.31)</td>
<td>0.99*** (3.37)</td>
<td>0.52* (1.87)</td>
<td>0.39** (2.21)</td>
<td>1.21** (2.43)</td>
<td>0.70*** (2.70)</td>
<td>1.51 (0.84)</td>
</tr>
<tr>
<td>Border</td>
<td>3.18*** (5.68)</td>
<td>1.78*** (3.32)</td>
<td>4.43*** (4.81)</td>
<td>2.19*** (4.11)</td>
<td>1.78*** (4.94)</td>
<td>4.97*** (4.28)</td>
<td>3.18*** (5.73)</td>
<td>1.96 (0.57)</td>
</tr>
<tr>
<td>Corruption</td>
<td>0.47*** (5.51)</td>
<td>0.60* (1.71)</td>
<td>-0.27*** (-2.63)</td>
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<tr>
<td>Law and order</td>
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<tr>
<td>Bilateral exchange rate</td>
<td>0.60** (2.42)</td>
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<tr>
<td>Share of fuel in total exports</td>
<td>0.20** (2.42)</td>
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<td></td>
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<tr>
<td>Share of food in total exports</td>
<td>0.54*** (3.85)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of ores and metals in total exports</td>
<td>-0.05 (-0.22)</td>
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<td></td>
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<tr>
<td>Share of electrical machinery in total exports</td>
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<td></td>
</tr>
<tr>
<td>Log of India GDP00</td>
<td></td>
<td></td>
<td></td>
<td>-0.96 (-1.21)</td>
<td></td>
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<tr>
<td>R&amp;D expenditure</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>1.38 (1.07)</td>
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<tr>
<td>IT expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.26 (0.96)</td>
<td></td>
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<tr>
<td>IMP+EXP</td>
<td>-0.47 (-1.44)</td>
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<td></td>
</tr>
<tr>
<td>FTA</td>
<td>0.74*** (6.33)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Capital control on FDI</td>
<td></td>
<td></td>
<td></td>
<td>-0.83*** (-3.22)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Observations</td>
<td>241</td>
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<td>167</td>
<td>223</td>
<td>241</td>
<td>211</td>
<td>241</td>
<td>56</td>
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<tr>
<td>R²</td>
<td>0.10</td>
<td>0.11</td>
<td>0.13</td>
<td>0.14</td>
<td>0.20</td>
<td>0.18</td>
<td>0.09</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Note: ***, **, and * denotes significance level at the 1%, 5%, and 10% level, respectively.
First we will discuss results with respect to the perceived needs of the two countries. From Table 1 and 2, we can see that both India and China are motivated to invest due to natural resource reasons. Since we break down natural resources into fuel, food and ores and metals, we are able to test the natural resource hypothesis in a more refined manner. For the Chinese case, they tend to invest in countries for fuel. The coefficient associated with food is actually negative. This may reflect cases where China invests in some African economies which are abundant in fuels but poorly endowed with agricultural products. The index associated with ores and metals is not significant. For India, investors tend to invest in economies with fuel as well as for food, but for ores and metals, the Indian regression coefficient is not significant. Of course, there are isolated but high profile cases where China and India invest to secure supplies of ores and metals, but this does not appear to be a general tendency over the periods (the period for China is from 1991 to 2008 while for India, it is 1996 to 2008) we are considering.

There is only limited evidence that India and China invest to acquire technology. But the technology acquisition hypothesis holds true for China only for the IT expenditure but not for the R&D expenditure. In fact, the R&D expenditure has the wrong sign for China. For India, both proxies are insignificant.

For the home market macroeconomic variables, China’s FDI outflows are positively related to its GDP and its bilateral exchange rate with the destination countries. Contrary to conventional results, a decline in the value of the yuan induces an increase of Chinese FDI outflows. However, the magnitude of the yuan exchange rate variable is very small. For the India case, a rise of the bilateral rupee exchange rate raises FDI outflows but the domestic GDP is insignificant. As for the other characteristics of the
host countries, the total trade indicators are not significant for either the Chinese or Indian regressions. However, the openness index in the form of FTA is positive and significant for both India and China. Capital controls on FDI are negatively and significantly related to Indian outflows but insignificant for Chinese outflows.

We next turn to the core gravity variables. After controlling for other determinants, both FDI outflows increase in destination economies which share common borders with India and China. But the similarities end with the border dummy. China is generally seen to invest in larger but poorer economies (larger GDP and smaller GDP per capita). It is also investing in destinations that are closer to home. In contrast, India is generally investing in economies that are smaller and richer (smaller GDP and larger GDP per capita). It is investing further away from home. Part of these differences reflects the fact that China has significant investment in Asia as well as in large developing countries in Latin America and in Africa. Some of these countries have large population but low purchasing power. Compared with China, India has more investment in richer countries that are further away.

A much more striking contrast between the Indian and the Chinese cases is the differences between the institutional features of their host economies. Note that a higher value of the corruption index corresponds to less corrupt economies, while a higher value of the law and order index refers to economies with better rule of law and more stable societies. From Table 1, we see that Chinese outward investment is higher in more corrupt economies, but the index of law and order is insignificant. India seems to be following the expected pattern of FDI from other economies and invest more in countries which are less corrupt and with a better law and order index.
One interpretation of our result on FDI outflows and institutional quality is that Chinese FDI abroad is mostly dominated by state-owned enterprises. In 2006, more than 86% of Chinese FDI flowing abroad was accounted for by state-owned enterprises.

There are at least two characteristics that differentiate the state-owned enterprises from their private counterparts. First, the state-owned firms may be implicitly insured by the Chinese government, or at least their managers may perceive that they are so insured. There are no binding, hard budget constraints and their losses from taking excessive risks can be written off with limited bankruptcy implications. If this is the case, the Chinese outward FDI can take risks that are not necessarily market-based. They can afford to invest more in more corrupt economies. In contrast, the Indian FDI outflows are mostly done by private Indian multinationals. They may tend to assess their host economies like profit maximizing firms in other countries. They tend to invest in less corrupt countries with a better system or law and order. Note that this interpretation assumes that the state-owned firms are still maximizing profits, except that they are operating under a different set of financial constraints. In the case of India, since the firms are privately-owned and their losses will bite, deviating from profit maximization will be much more costly.

Another interpretation with this contrasting result may be related to potential foreign policy considerations indirectly carried out by the state-owned firms on behalf of the government. Such FDI may be an investment to buy goodwill and can be seen as a disguised form of Chinese foreign aid. The state-owned firms invest in a variety of projects (including infrastructure projects) that generate good will in these developing

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6 Our data do not allow us to differentiate the two different and related hypotheses. But both interpretations have to do with the fact that much of Chinese investment is done with state-owned firms.
economies. These economies may have poor governance indicators, but since the objective of the investment is not purely to maximize profits, they will still invest more. This interpretation assumes that the state-owned firms are not maximizing profits, or at least they are not maximizing profits alone. Their objectives may be a weighted sum of profits and foreign policy considerations. The fact that these enterprises can do such investment is partly due to their budget constraints not being totally binding. So this interpretation is not entirely independent of the previously discussed interpretation.

Our regression results for China may be partly tied to the investment in African countries. According to a recent World Bank report (2008a), exports of natural resources from Sub-Sahara Africa to China increased from US$3 billion in 2001 to US$22 billion in 2006, mostly in petroleum. Furthermore, the financing provided by China in Africa is very nearly matching the conventional definition of “concessional finance”, with about one-third of the component having the character of a grant. In fact, more than 60 percent of Chinese investment in Africa is focused on four countries: Sudan, Angola, Nigeria and Ethiopia (World Bank 2008b). Furthermore, according to a study based on firm-level data, it is reported that Chinese investment in Africa adds to African exports to Asia as well (Broadman 2007). These features of China’s investment in Africa help explain why Chinese investment is positively related to the degree of corruption in the host countries. While it is difficult to judge the impact of such investment-cum-foreign policy, existing empirical studies tend to highlight the importance of Chinese investment in narrowing the infrastructure deficits that poor Africa nations are facing.

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7 This is consistent with our regression result that Chinese investment abroad is mainly seeking fuel, not so much food or even metals.
4. Conclusion

In recent years, we have witnessed a surge of FDI outflows from India and China. Where are the motives of such FDI outflows? What are the characteristics of these destination countries? In this paper, we examine the determinants of Indian and Chinese outward FDI. We use an augmented gravity model and test several hypotheses concerning India and Chinese outflows. The core gravity model includes GDP of the host economies, GDP per capita, distance and a dummy indicating sharing of a common border.

In terms of motives, we test if the outward FDI is natural resource-seeking (seeking fuel, food or metals) and technology-seeking. We also estimate the importance of some of the host countries’ characteristics, including their degrees of openness, their restrictions on FDI, their degree of corruption and their indices of law and order. We further examine some of the home country’s macroeconomic variables: Indian and Chinese GDPs and the bilateral exchange rates.

There are three sets of results. First, Chinese investment seems to be attracted to more corrupt countries, while India is attracted to less corrupt economies with better rule of law. Our analysis and interpretations suggests that our result of China investing in more corrupt destinations may be tied to Chinese investment in African countries. The result may also be tied to investment being conducted by state-owned firms. Chinese companies are building hydroelectric power stations, roads, bridges and other forms of infrastructure, often in exchange for oil from some African countries with poor governance indicators (e.g. Sudan). It is not the point of this paper to evaluate the welfare impact of such investment-cum-foreign policy in sub-Saharan Africa and elsewhere. But
according to several studies in the literature (World Bank 2008a, 2008b, Broadman 2007), as a by-product of China’s quest for oil in Africa, China is also providing concessional financing to Africa, help increase African exports to Asia as well as contributing to narrowing the infrastructure deficits of the sub-Saharan African economies.

Second, Chinese FDI is going to economies with larger GDP but smaller GDP per capita. China seems to be investing in economies that are closer to home. This may be because China has been investing, among other countries, in developing countries (including those in Asia) with large population. For India, FDI is going to smaller but richer host countries. But India seems to be investing in destinations that are far away. Lastly, both India and China seem to be investing in economies to seek fuels. There is not much evidence that they are investing to acquire technology. A lower value of the yuan and a higher value of the rupee relative to the value of the currencies of the host countries seem to increase Indian and Chinese investment abroad.

This paper provided some interesting results concerning the contrasts of India and Chinese FDI outflows. However, given that this issue is still a relatively new topic of research, we believe that more work is needed to generate robust empirical conclusions.
References:


Appendix:


Indian FDI outflows 1996-2008 are taken from various sources, including Ministry of Finance, Indian Government; Reserve Bank of India, Indian Government; UNCTAD, ASEAN official website and JETRO.

GDP and GDP per capita for various economies are taken from World Development Indicators.

Distances are taken from David Hummel’s website.

Corruption indices are taken from International Country Risk Guide (ICRG), the PRS Group. It ranges from 0 to 6, with a higher number indicating a lower level of corruption.

Law and Order index is taken from International Country Risk Guide (ICRG), the PRS Group. It ranges from 0 to 6, where a higher number indicating a better system of law and order.

(Export+ Imports)/GDP ratios are from World Development Indicators and own calculations.

Bilateral exchange Rates are yuan or rupee per foreign exchange; calculated from IMF International Financial Statistics.

Ores and metals exports as percentages of merchandise exports taken from World Development Indictors.

Shares of food exports are taken from World Economic Indicators.

Shares of fuel exports are taken from World Economic Indicators.

IT expenditures are taken from World Economic Indicators.

Research and Development expenditures are taken from World Economic Indicators.

FTA data are constructed from websites from the WTO, UNCTAD and World Bank.

Capital Controls on FDI are from UNCTAD, IMF and World Bank.