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## Foreign Direct Investment. A Bid For Progress?

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#### Abstract

Foreign Direct Investment (FDI) is not a unique explanation for growth and progress, but is one of the more useful indicators of the open opportunities. It reveals preferences of the developed countries' private sector, while the emerging economies seem to participate in a global bid. That bid is for capital, for the technology and know-how normally associated to investments, and for the final award, progress and development.

Besides policies, politics and initial conditions, the economy matters. An estimation of economic determinants to FDI is done, and to take into account best relative results, an econometric frontier is calculated in order to determine how do the more efficient in attracting FDI.

Some new perspective is added to conventional wisdom: there are countries, which are in some sense "more efficient producers" of FDI. The efficient frontier approach could shed some light of the link from sowing to reaping. Some shocking results were attained, when we tried to ask the question "Which are the best harvesters?" The more "sexiest" countries are not the more efficient producers of FDI in our ranking.

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#### **I-Introduction**

Foreign Direct Investment (FDI) is not a unique explanation for growth and progress, but is one "object of desire" for those countries that want to grow. It is important for both: host and home countries prosperity. The Emerging Economies seem to participate in a global bid for capital, for the technology and know-how normally associated to investments, and for the final award, progress and development.

A lot of countries had liberalized its restrictions to FDI, and some attention had been devoted to institutions, legal reforms and local practices. Many countries joined the "bid" through generations of reforms (Sauvant, 2001). The former means, "policy matters".

The quality of host-country institutions and practices also influences the allocation of FDI. In other words, "politics matters".

Some countries are attractive for their peculiar conditions, strategic location, dimension of the market, or source of some exclusive raw materials. So, "initial conditions matter".

Does "the economy matter"? Some of the former are complements to a more decisive set of FDI determinants. Investors are economic agents, and their motivations are economic at the end of the day.

From this "Bid for Progress", what do we already know? A brief summary of available knowledge is given in the second section of this article, in order to answer that question. A short review of the literature is made there.

A step ahead, which is the more recent evidence? In the third section, an empirical investigation is conducted to obtain the economic determinants of FDI. A database is used to estimate a regression of FDI flows against its explanatory variables, both at global and regional level.

Which are the best harvesters? FDI is not widespread distributed; moreover, money goes to some specific destinations. The idea implies questioning on how somebody reaps more, sowing the same. FDI "is produced" by some combination of economic factors. Here some light is shed about the "more efficient producers of FDI". The difference between that countries and some other who share similar economic characteristics could be attributed to a relatively efficient use of the resources a particular country is endowed with. May be, the way to reach the "frontier" are achievements in policies, politics and in modifying (if possible) initial (disadvantaged) conditions.

In microeconomics, frontier's technology is used to improve the regulation of utilities, to assess quality of management in hospitals, schools or police precincts. The idea is appealing: is it possible produce more output with the same inputs; or looking at costs, it is feasible to spend less money to do the same. In our context, is it likely to obtain more FDI from home countries with the results –even poor- a host country can exhibit?

What's new? A summary of the findings is made in the fifth and last section.

### II-What do we Already Know?

FDI is an especially potent device of development, because of its potential to transfer technology and know-how from home to host countries. Added to the former, FDI provides insurance for bad times: debt has to be honored period by period; dividends are paid just on good times. FDI provides specific and physical investments. Figure 1 shows the closer relationship between FDI and the real GDP (both in logarithms).

Figure 1: Log(IED) versus Log(GDPReal)



Source: Own Elaboration on Database (below we refer to it as "Database" for short) elaborated on IMF International Financial Statistics and Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 6.1, Center for International Comparisons at the University of Pennsylvania (CICUP), October 2002. FDI was taken from United Nations Conference on Trade and Development (UNCTAD) Statistics.

FDI contribution to growth comes through its role as a channel for transferring advanced technology from developed to emerging economies. Knowledge "spillovers" can lead to improvements in productivity and efficiency in the host countries. There is evidence in the empirical literature that "spillovers" of FDI exist, but there is no consensus on their magnitude. This seems to depend on the host country ability to absorb technology, which tends to be correlated with some human capital level (Lim, 2001).

What do we know about FDI? Capital flows to developing countries are positive, small and mostly in the form of loans instead of FDI. From 1970 to 1997 a subset of 47

non-OECD countries received net capital imports for, in average, 10% of their wealth. One fourth of net capital flows are FDI (Kraay et al, 2004).

As IFC (1997) recalls, the FDI has fluctuated over the time. Trends in FDI have reflected changes in policy environment, and traditionally, flows had been concentrated in few countries. FDI fell since 1999, and the events of September 2001 cut some flows. But, according to Palmade and Anayiotas (2004), the decline is more a consequence of the end of the privatization boom of the 1990s. They report that FDI is coming from more countries and going to more diversified destinies.

Balasubramanyam (2001) recalled that in recent years some FDI had taken place as M&A operations (privatizations in developing countries, or post crisis changing hands).

FDI is highly concentrated. In the year 2000, two thirds of the total stock of FDI in developing countries was located in a restricted list of eight Latin American and Asian economies.

Two types of FDI are identified in the literature. "Horizontal FDI" refers to market-seeking investments to provide the domestic market of the host country (sometimes protected by tariffs and non-tariffs barriers). "Vertical FDI" denoted cost minimizing investments in a location whose labor costs, for example, are advantageous to produce. If FDI is related to natural resources exploitation, it is more difficult to classify. Because of the former, trade barriers in aggregate regressions tend to have ambiguous sign: when "Horizontal FDI" is predominant, the sign is expected to be negative with respect to trade openness. The opposite holds for "Vertical FDI" (Demekas et al, 2005 and Lim 2001).

For empirical estimates, a list of Balasubramanyam (2001) provides some variables to include in the regressions to assess FDI economic drivers. Per capita GDP and its growth rate are surely important determinants to attract FDI. They have to do with the size and the potential growth of the country (based on past performance). It is worth noting that some FDI is "domestic market oriented" (for example, in the form of import substitution production), while some other is "foreign market oriented" (for example, as export oriented industries). The market size and vicinity to the home country explained most of the appealing of some destinations. Market size proxied by real GDP or GDP per capita is significant and positive in most of the empirical studies (Lim, 2001). Natural resources are normally "initial conditions", but the population of the countries could approximate the human resources (and the potential of growth of the market). Macroeconomic stability could be proxied by the volatility of exchange rates and inflation rate.

Dollar et al (2004) pointed out that standardized surveys of large samples of firms reveal problems in "hard infrastructure" (like electricity or telecom networks) and in "soft infrastructure" (as local practices, for example in customs). Dollar et al (2004), using such a survey, identified facts related to the differential performance of China in recent years, in comparison with some other locations. For "investment climate" it can be understood the institutional, policy and regulatory environment in which firms operate. This concept of "investment climate" at firm level is related with high-quality institutions' discussion. Several draw backs in "investment climate" act as an informal kind of trade barrier. Dollar et al (2004) found that a sound "investment climate" –as reflected in custom clearance times, infrastructure and financial services availability attracts foreign investment. Distance to markets and agglomeration economies could explain the success of some locations with respect to others.

Heritage Foundation's Economic Freedom Index could be seen as an indicator of context conditions. The Index translates to a cardinal measure, qualitative conditions which reflect economic freedom. The Index goes from 1 to 5, the bigger the Index, the worst business climate for investments. The relationship between the Index and FDI (in logarithms) could be seen below, illustrating the fact that investment and business climate go in the same direction.

To pertain to a free trade agreement could mean in practice "trade creation" with the partners and "trade diversion" with the outsiders. WTO forbids arrangements intended to "trade diversion". In practice, it is an empirical matter to determine the result of every agreement. But if only "trade creation" dimension is considered, participating in such an agreement implies in practice a more extended market for individual participants.

Empirically, the impact of openness is mixed, depending on whether FDI is mostly "Horizontal" or "Vertical". When the effects of regional integration are reviewed, again the effects are mixed. Integration enlarges home market but made reduce the competition of exports if the arrangement diverts trade (Lim, 2001).



Figure 1: Log(IED) versus Heritage Foundation's Economic Freedom Index (EFI)

Source: Own elaboration on "Database".

If transport costs are included, possibly an ambiguous sign tend to appear. Perhaps it is so because of its close ties with the type of "Horizontal" or "Vertical" FDI. High transport costs protect domestic markets from competition from abroad. At the same time, low transportation costs are an advantage for exports industries (Lim, 2001).

With labor costs there are also ambiguities in sign. Perhaps, if it were possible to obtain, unit labor costs could be better indicators, but it is not a simple task to construct that series (Lim, 2001).

Having in mind that economic reasons are crucial in the explanation of FDI flows, the examination of empirical literature around developing countries inflows shows that the flows are explained by supply reasons (or "Push Factors") to a host country, and by demand-side variables (or "Pull Factors") from home countries. As Dasgupta and Ratha (2000) pointed, most of the analysis estimates a reduced form equation considering both elements. The same was done in this paper.

Normally, there is some credit rationing in the international market for funds. The global market for financial flows could be conceived as a given pool of total funds, seeking to raise returns while diversifying risks in developing countries (Dasgupta and Ratha, 2000). Diminishing returns in high-capitalized countries made available more profitable (and riskier) projects in developing countries, where capital is relatively scarce. But, most emerging economies are only marginally creditworthy. Credit rationing appears because of sovereign risk. Sometimes, the market clears by prices, but when sovereign spreads grow so much, ratings tend to register the disruption, because of, for example, a default episode. Kraay et al (2004) built a simple model that highlights the interplay between diminishing returns, production risk and sovereign risk. They recall that in the last 200 years there have been four episodes of widespread systemic default by developing countries. Sovereign risk, according Kraay et al (2004), creates a home bias in the demand for capital that might explain the relatively low flows of FDI to developing countries.

### III-Which is the more recent evidence?

The "database" includes data on 99 countries<sup>3</sup> and it is constructed with the following variables: FDI (Inflows of Foreign Direct Investment), POP (Population), GDPREAL (Real Gross Domestic Product), OPENNESS (Exports plus Imports/GDPREAL), G (Real Public Expenditure/GDPREAL), CPI (Annual Inflation Rates) and GROWTH (Annual Growth Rates of GDPREAL). Descriptive statistics of the database are shown in Table 1 and simple correlations between the variables in Table 2.

| TABLE 1: DESCRIPTIVE STATISTICS |            |            |           |            |             |          |          |  |
|---------------------------------|------------|------------|-----------|------------|-------------|----------|----------|--|
|                                 | FDI        | OPENNESS   | G         | GDPREAL    | CPI         | GROWTH   | POP      |  |
| Mean                            | 4021.35    | 67.78      | 18.74     | 327662.20  | 85.89       | 1.73     | 49.64    |  |
| Median                          | 257.44     | 61.13      | 16.81     | 50373.00   | 7.37        | 2.00     | 10.22    |  |
| Maximum                         | 314007.00  | 194.23     | 69.11     | 9464715.00 | 23773.10    | 43.05    | 1273.98  |  |
| Minimum                         | -4550.00   | 10.12      | 3.01      | 413.00     | -11.69      | -41.90   | 0.07     |  |
| Std. Dev.                       | 17085.04   | 34.36      | 10.66     | 931719.60  | 845.96      | 5.14     | 156.61   |  |
| Skewness                        | 11.49      | 0.88       | 1.31      | 6.05       | 20.80       | -0.41    | 6.13     |  |
| Kurtosis                        | 173.15     | 3.55       | 5.60      | 46.39      | 529.05      | 15.11    | 42.04    |  |
| Jarque-Bera                     | 1509599.00 | 174.02     | 697.95    | 103903.80  | 14259520.00 | 7541.29  | 85763.78 |  |
| Probability                     | 0.000000   | 0.000000   | 0.000000  | 0.000000   | 0.000000    | 0.000000 | 0.000000 |  |
| Sum                             | 4942246.   | 83299.85   | 23035.25  | 4.03E+08   | 105570.6    | 2121.40  | 61013.00 |  |
| Sum Sq. Dev.                    | 3.58E+11   | 1449523.00 | 139648.60 | 1.07E+15   | 8.79E+08    | 32428.90 | 30117263 |  |
| Observations                    | 1229       | 1229       | 1229      | 1229       | 1229        | 1229     | 1229     |  |

Source: Own elaboration on Database.

| TABLE 2: CORRELATION MATRIX |       |                 |       |         |       |        |      |  |
|-----------------------------|-------|-----------------|-------|---------|-------|--------|------|--|
|                             | FDI   | <b>OPENNESS</b> | G     | GDPREAL | CPI   | GROWTH | POP  |  |
| FDI                         | 1.00  |                 |       |         |       |        |      |  |
| OPENNESS                    | -0.10 | 1.00            |       |         |       |        |      |  |
| G                           | -0.16 | 0.24            | 1.00  |         |       |        |      |  |
| GDPREAL                     | 0.68  | -0.29           | -0.15 | 1.00    |       |        |      |  |
| CPI                         | -0.02 | 0.00            | 0.09  | -0.02   | 1.00  |        |      |  |
| GROWTH                      | 0.05  | 0.02            | -0.11 | 0.06    | -0.17 | 1.00   |      |  |
| POP                         | 0.21  | -0.26           | 0.06  | 0.53    | -0.01 | 0.10   | 1.00 |  |

Source: Own Elaboration on "Database".

The estimations were developed in one general model (Global) explaining the logarithm of FDI against a constant, Openness, CPI, log(GDPreal), log(pop), GROWTH

<sup>&</sup>lt;sup>3</sup> Argentina, Austraia, Austria, Bangladesh, Barbados, Belize, Benin, Bolivia, Botswana, Brazil, Burundi, Canada, Cape Verde, Chile, China, Colombia, Congo, Costa Rica, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Finland, France, Gabon, Germany, Ghana, Greece, Grenada, Guatemala, Guinea, Haiti, Honduras, Hungary, Iceland, India, Indonesia, Iran, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Korea, Latvia, Lesotho, Lithuania, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Moldova, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Rwanda, Senegal, Seychelles, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Syria, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, United Kingdom, United States, Uruguay, Venezuela, Yemen, Zambia, Zimbabwe.

and G, and seven regional models, with the same equation. The best fitted was for the panel data version, considering fixed effects. GROWTH and G were not significant in any estimation. Two other variables –VOLGROWTH and VOLCPI-, indicators of the volatility of GDP growth rate and inflation rate, were not significant, neither in the Global nor at the regional levels.

The Global and the regional models are satisfactory. The signs of the determinants are reasonable, and remain the same in the regional estimations.

In the global model the influence of Openness is positive but moderate (indicating a mild vertical FDI predomination), the CPI has negative sign –as it can be expected-, and the logs of GDPreal and POP are positive. The R<sup>2</sup> is high (0.88) and the Theil Coefficient -near to zero- is indicating that the predictive capacity of the model is important. The fixed effects significance denotes country differences.

The regional estimations are as good as the Global. The model remains with no changes for the Emerging Economies (76 countries). Results are very similar as the Global equation. For the Developed countries, CPI and Log(POP) are no significant variables, as it can be expected, but the model continues to be satisfactory.

Next stage is the decomposing of the Emerging Economies in five groups: Latin America (where the log of GDPreal is not significant), South Eastern Asia (where neither Openness, nor CPI, nor the log(POP) are significant), the Rest of Asia (with similar structure), Eastern Europe (more similar to Latin America, with the exception of log(POP) which is no significant) and Africa, where all the variables are significant. The worst values for the R2 are for Eastern Europe and Africa, and the worst Theil corresponds to the latter). Table 3 summarized all the results.

| TABLE 3: FDI AND ITS DETERMINANTS (SAMPLE: 1988-2000. FIXED EFFECTS CONSIDERED) |          |           |           |          |          |              |          |          |
|---|----------|-----------|-----------|----------|----------|--------------|----------|----------|
|   | Log FDI  | Log FDI   | Log FDI   | Log FDI  | Log FDI  | Log FDI      | Log FDI  | Log FDI  |
|   | Global   | Emerging  | Developed | LAC      | SE Asia  | Rest of Asia | E Europe | Africa   |
|   |          | Economies | Countries |          |          |              | _        |          |
| С   | -23.64   | -20.35    | -33.01    | -8.69    | -25.68   | -48.02       | 3.07     | -20.12   |
|   | (-10.66) | (-8.78)   | (-2.97)   | (-8.90)  | (-7.72)  | (-7.37)      | (4.31)   | (-4.28)  |
| OPENNESS  | 0.02     | 0.01      | 0.03      | 0.01     |          |              | 0.03     | 0.02     |
|   | (10.27)  | (7.38)    | (3.23)    | (4.56)   |          |              | (4.73)   | (4.21)   |
| CPI   | -0.0002  | -0.002    |           | -0.004   |          |              | -0.006   | -0.0001  |
|   | (-5.75)  | (-5.67)   |           | (-7.41)  |          |              | (-4.04)  | (-2.93)  |
| Log GDPReal   | 1.90     | 1.50      | 3.11      |          | 2.57     | 4.50         |          | 1.67     |
| _   | (6.88)   | (4.94)    | (3.39)    |          | (10.12)  | (8.12)       |          | (2.69)   |
| Log POP   | 2.81     | 3.51      |           | 7.60     |          |              |          | 2.93     |
| _   | (4.91)   | (5.72)    |           | (12.66)  |          |              |          | (2.96)   |
| Cross-Sections  | 99       | 76        | 21        | 24       | 6        | 10           | 9        | 29       |
| Included  |          |           |           |          |          |              |          |          |
| Total Panel   | 1163     | 879       | 262       | 300      | 75       | 116          | 79       | 335      |
| Observations  |          |           |           |          |          |              |          |          |
| R2  | 0.89     | 0.86      | 0.82      | 0.91     | 0.83     | 0.78         | 0.67     | 0.75     |
| Adjusted R2   | 0.88     | 0.84      | 0.81      | 0.90     | 0.81     | 0.76         | 0.63     | 0.72     |
| F-STAT  | 87.77    | 63.12     | 52.77     | 110.90   | 56.02    | 38.68        | 14.39    | 29.04    |
|   | (P=0.00) | (P=0.00)  | (P=0.00)  | (P=0.00) | (P=0.00) | (P=0.00)     | (P=0.00) | (P=0.00) |
| DW  | 1.14     | 1.17      | 0.96      | 1.17     | 0.55     | 1.20         | 0.82     | 1.46     |
| Theil Coefficient   | 0.0697   | 0.0823    | 0.0434    | 0.0525   | 0.0301   | 0.0992       | 0.0765   | 0.1262   |
| (Cov Proportion in brackets).   | (0.9720) | (0.9629)  | (0.9532)  | (0.9774) | (0.9539) | (0.9400)     | (0.9036  | (0.9298) |

Source: Own Elaboration on "Database".

### IV-How performed the best "harvesters"?

It is worth to recall that OLS regressions reflect the average conduct of the phenomenon under study. Is there any instrument to assess the better-performed observations? The answer is "yes, frontier analysis does".

The frontier approach is used to determine the best level of output, which is possible to produce with the current technology and the available inputs, as well as the lower costs to produce determined levels of output.

Technological frontier studies can be classified according to the specification (production or cost functions) and estimation methodologies (using statistical or mathematical programming methods).

We estimate a "production" function, using the log of FDI as the "output" indicator and its determinants as "inputs". The following step is to decide on whether a deterministic or stochastic frontier is to be used.

If the "output" is to be explained by the "inputs":

1) Output = constant +  $\Sigma$  (explanatory variables or "inputs") + error term

Where [constant + $\Sigma$  (explanatory variables or "inputs")] = deterministic explanation.

If a deterministic approach is chosen, all observed difference between a particular observation and the frontier is attributed to inefficiency: the whole "error term" is associated to inefficiency.

In the case of stochastic frontiers, estimated function is similar to the one presented before, but now, the error term is no longer equal to inefficiency. It is decomposed into two terms:

2) Error term = ui + vi

Where ui >0 and vi is not restricted.

The vi term captures the effects of statistical noise, while the ui error term, represents productive inefficiency.

We estimated a "production function", relating the "output" log(FDI) with four "inputs": log(gdpreal), ln(pop), CPI, Openness and a constant. Our approach is statistic and stochastic.

The best results are presented in Table 4, and the ranking of best performed ("more efficient") in producing FDI with their "inputs" are displayed in Table 5.

With respect to the ranking, a first view is shocking: the "sexiest" countries (with the exception of Japan in the third place) are not present at the top of the list. Moreover, the first European country, which appears, is Italy, in the 23<sup>rd</sup> place. Germany is in 27<sup>th</sup> place, and the United States in the 64<sup>th</sup>. Mexico, Brazil and China are placed in the worst fourth of the distribution. It sounds like a paradox.

The rationale of the ranking is related with the concept of efficiency. There are countries, at first sight not "sexy" but which results in terms of FDI attraction are more satisfactory than other well endowed countries. At the end of the list, for example, is Nigeria, a oil exporter country, with more than 100 million inhabitants and important in the African context, or at 95<sup>th</sup> position is Argentina, an important country in Latin

American context, with plenty of resources, including a relative well educated population. Both examples, by the way, have a very unstable history.

| TABLE 4: "PRODUCTION" FRONTIER FOR FDI.  |  |               |        |       |          |         |  |  |  |
|--|--|---------------|--------|-------|----------|---------|--|--|--|
| LNFDI = F(LNGDPREAL, LNPOP, CPI, OPENNESS, CONSTANT).                          |  |               |        |       |          |         |  |  |  |
| Stoc. frontier normal/half-normal model Number of obs = 1163                   |  |               |        |       |          |         |  |  |  |
|  | Wald chi2(4) = 3905.41                         |               |        |       |          |         |  |  |  |
| Log likelihood = -   | 1962.0328                                      | Prob > chi2 = | 0.0000 |       |          |         |  |  |  |
| Lnfdi  | i Coef. Std. Err. Z P> z  [95% Conf. Interval] |               |        |       |          |         |  |  |  |
| Lngdpreal  | 1.5648   | 0.0339        | 46.05  | 0.000 | 1.4982   | 1.6314  |  |  |  |
| Lnpop  | -0.5904  | 0.0413        | -14.27 | 0.000 | -0.6715  | -0.5094 |  |  |  |
| Срі  | -0.0002  | 0.0000        | -7.71  | 0.000 | -0.0003  | -0.0001 |  |  |  |
| Openness   | 0.0136   | 0.0013        | 10.06  | 0.000 | 0.0110   | 0.0163  |  |  |  |
| Constant   | -9.3899  | 0.3391        | -27.69 | 0.000 | -10.0546 | -8.7253 |  |  |  |
|  |  |               |        |       |          |         |  |  |  |
| /lnsig2v   | -0.8200  | 0.1298        | -6.32  | 0.000 | -1.0746  | -0.5655 |  |  |  |
| /lnsig2u   | 1.3646   | 0.0723        | 18.87  | 0.000 | 1.2229   | 1.5063  |  |  |  |
| Sigma_v  | 0.6636   | 0.0430        |        |       | 0.5843   | 0.7536  |  |  |  |
| Sigma_u  | 1.9784   | 0.0715        |        |       | 1.8431   | 2.1237  |  |  |  |
| Sigma2   | 4.3547   | 0.2546        |        |       | 3.8556   | 4.8538  |  |  |  |
| lambda   | 2.9813   | 0.1024        |        |       | 2.7847   | 3.1822  |  |  |  |
| Likelihood-ratio test of sigma_u=0: chibar2(01) = 1.4e+02Prob>=chibar2 = 0.000 |  |               |        |       |          |         |  |  |  |

| TABLE 5: RANKING OF MORE "EFFICIENT" FDI PRODUCERS. |        |         |       |        |      |  |  |  |
|---|--------|---------|-------|--------|------|--|--|--|
| Top Ten Countries                                   | random | epsilon | te    | g_rank | Rank |  |  |  |
| Iran  | 13.623 | 0.000   | 1     | 1      | 1    |  |  |  |
| Bangladesh  | 12.951 | -0.671  | 0.511 | 2      | 2    |  |  |  |
| Japan   | 12.713 | -0.909  | 0.403 | 3      | 3    |  |  |  |
| Nepal   | 12.327 | -1.295  | 0.274 | 4      | 4    |  |  |  |
| Mauritius   | 12.245 | -1.378  | 0.252 | 5      | 5    |  |  |  |
| Congo   | 12.027 | -1.595  | 0.203 | 6      | 6    |  |  |  |
| Barbados  | 11.936 | -1.687  | 0.185 | 7      | 7    |  |  |  |
| Kenya   | 11.782 | -1.841  | 0.159 | 8      | 8    |  |  |  |
| Guinea  | 11.717 | -1.906  | 0.149 | 10     | 10   |  |  |  |
| Selected Examples                                   |        |         |       |        |      |  |  |  |
| India   | 11.425 | -2.198  | 0.111 | 15     | 15   |  |  |  |
| Korea   | 11.123 | -2.500  | 0.082 | 21     | 21   |  |  |  |
| Italy   | 10.939 | -2.683  | 0.068 | 23     | 23   |  |  |  |
| Germany   | 10.762 | -2.861  | 0.057 | 27     | 27   |  |  |  |
| United States                                       | 9.975  | -3.647  | 0.026 | 64     | 64   |  |  |  |
| Mexico  | 9.707  | -3.916  | 0.020 | 77     | 77   |  |  |  |
| Brazil  | 9.700  | -3.922  | 0.020 | 78     | 78   |  |  |  |
| China   | 9.421  | -4.202  | 0.015 | 89     | 89   |  |  |  |
| Argentina   | 9.081  | -4.541  | 0.011 | 95     | 95   |  |  |  |
| Nigeria   | 8.570  | -5.053  | 0.006 | 100    | 100  |  |  |  |

## V-What's new? A Summary of the Findings

What do we can add to current wisdom is a perspective and an application of a technique to the question "How performed those who succeeded?"

The perspective is the approach of FDI (from the point of view of host countries) as a global bid. In that contest, every country made offers to a pool of capital searching opportunities. Like in a beauty contest, much of the story is already written by initial conditions. But policies and politics matter and the economy have the ultimate word. We estimated a robust model for the Global economy and seven regional groups. Results are plausible and the fitted is satisfactory.

How performed the best "harvesters"? The frontier approach is applied in a nonconventional way with respect to the use that was thought in microeconomics grounds. And it seems to shed some light in the study of one of the paths to progress and development through private sector activity.

We find a strange ranking: the "sexiest" countries (with the exception of Japan in the third place) are not present at the top of the list. Moreover, the first European country, which appears, is Italy, in the 23<sup>rd</sup> place. Germany is in 27<sup>th</sup> place, and the United States in the 64<sup>th</sup>. Mexico, Brazil and China are placed in the worst fourth of the distribution.

The rationale of the ranking is related with the concept of efficiency. There are countries, at first sight not "sexy" but which results in terms of FDI attraction are more satisfactory than other well endowed countries.

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