On the Effect of *Doing Business* on Foreign Direct Investment

Ricardo Sebastian

April 2014

Many people who use *Doing Business* data—particularly in policy-making circles and in the private sector—associate better performance on the *Doing Business* indicators with greater inflows of foreign direct investment (FDI), even though the methodology is not explicitly designed for this purpose. Since the launch of last year's report nearly 2,000 articles in the international press have drawn a connection between FDI and *Doing Business*.

Such articles often suggest that higher *Doing Business* rankings will be associated with more foreign investment, which is believed to create jobs, bring in new technologies and processes and have other beneficial collateral effects on the real economy. And many senior government officials have suggested that a better ranking for an economy implies that its investment climate is more favorable to foreign investors.

The case studies underpinning the *Doing Business* indicators focus on small to medium-size domestic firms, so the laws, regulations and practices tracked by the project are not necessarily relevant to larger foreign-owned fi rms. But the quality of the laws and regulations, and the extent to which this quality is reflected in their implementation, may be a useful signal to foreign investors of the overall quality of the business environment. And some laws may indeed affect foreign owned firms in the same way that they affect domestic firms.

Given the interest of so many governments in attracting more foreign investment, this raises an important question: does *Doing Business* actually matter for FDI? If so, does this suggest that *Doing Business* indicators reflect the quality of the investment climate at a broader level? This case study presents evidence suggesting that they do -- supporting a broader claim that economies that provide a good regulatory environment for domestic firms tend to also provide a good one for foreign-owned firms.

A first look at the link

There is certainly a correlation between the overall ease of doing business and FDI flows. Grouping economies by the *Doing Business* distance to frontier score for 2011; those closest to the frontier in regulatory practice received substantially more FDI than those in the middle, which in turn received substantially more than those furthest from the frontier. Also, FDI inflows per person in 2011 were higher for economies that were closer to the frontier.

But these are simple statistical correlations looking at the relationship between performance on the distance to frontier measure and FDI at a particular point in time. What does more robust research say about the determinants of FDI flows?

Research on FDI determinants

A large body of research has looked at the question of what the key drivers of FDI are. One approach in the literature sees FDI as being market-seeking (driven by economy size and country location), efficiency-seeking (driven by human capital or infrastructure quality) or resource-seeking (driven by the availability of natural resources or other strategic assets). Numerous studies have measured the significance of these and other explanatory variables (Blonigen and Piger, 2014)

Many studies use a "gravity model," which seeks to explain what causes FDI flows between 2 specific countries. This research confirms that such factors as the size of the market and its growth prospects, distance to important markets, relative labor endowments and openness to trade tend to be important drivers of FDI. For example, the larger the market, the greater the scope for economies of scale in production and thus the greater the chances for producing at competitive prices. Economies in Central and Eastern Europe have received large inflows of FDI over the past couple of decades because they are seen as entry points into the huge European market and also because they have relatively well-educated labor forces.

The institutional and regulatory framework has also been shown to be an important determinant of FDI. One study finds that judicial independence and labor market flexibility are significantly associated with FDI inflows, depending on the sector of the investment (Walsh and Yu, 2010). Another finds that corruption is a significant deterrent to FDI, having an effect comparable to the impact of substantial increases in the tax rate on foreign firms (Javorcik and Wei, 2000). Indirect taxes on foreign investors, which are higher than the direct foreign income taxes in many countries, also significantly reduce FDI inflows.5 Business regulations matter as well. Using a data set of regulations specific to foreign investment, a study finds that the number of procedures required to start a foreign-owned business and the strength of the arbitration regime both have a significant and robust effect on FDI.

What about *Doing Business*? Using 4 years of *Doing Business* data, a recent study finds that a better *Doing Business* ranking is significantly associated with larger FDI inflows7—strong support for the claim that higher *Doing Business* rankings are a broad indicator of an attractive investment climate. But the study is unable to find evidence for smaller subsets of economies, such as for developing economies (Wagle, 2011).Related research finds that business regulations as measured by *Doing Business* influence the impact of FDI inflows: economies with more effective regulations for starting a business benefit more from the FDI flows that they receive (Busse and Groizard, 2008).

What do the data tell us?

To expand on this existing body of research, *Doing Business* conducted its own econometric analysis of the relationship between *Doing Business* indicators and FDI flows. The analysis

generally follows the model established by an earlier study, considering the relationship between an economy's performance on *Doing Business* indicators and total FDI inflows from all other economies and taking into account differences in macroeconomic and governance conditions.

But it also adds to prior analysis in several ways. It uses distance to frontier scores rather than economy rankings, as a more precise measure of how far business regulations are from the most efficient practice. Most specifications use 1 year of distance to frontier scores to explain subsequent years of FDI inflows, rather than panel data over time. The analysis considers differences in natural resource exports, and it covers a larger sample of between 145 and 160 economies across specifications.

The basic model considers whether distance to frontier scores in 1 year are associated with total FDI inflows in the following year. When taking into account differences in income, inflation, population size, governance measures, openness to trade and exports of primary goods, the analysis finds significant results: a better distance to frontier score is significantly associated with larger inflows of FDI.

To account for potential fluctuations in annual FDI flows, a different model examines the distance to frontier score for 2005 and average FDI inflows for the subsequent 5 years, and finds similar results. When considering population and income levels, as well as when using several other model specifications, the analysis finds a significant positive association between the distance to frontier score and FDI inflows. Other research has shown that *Doing Business rankings and* reforms are associated with higher GDP growth (Haidar, 2009, 2011).

In general, these results need to be interpreted cautiously. Correlation of course does not imply causation. But the estimated magnitudes suggest that the laws, regulations and practices captured by *Doing Business* may have a strong influence on FDI flows. Results suggest that for an economy with an average distance to frontier score, moving 1 percentage point closer to the frontier regulatory environment is associated with $250–500 million more in annual FDI inflows. These strong correlations, if upheld by further and more refined research, would have signify cant policy implications: they suggest that relatively modest improvements in the regulatory environment could potentially attract substantial increases in foreign investment. Consider the example of Costa Rica. If causation is proven, the correlations suggest that improving its score by just a percentage point—to a regulatory environment comparable to that of Uruguay—would be associated with a 21% increase in its annual FDI inflows.

Good regulations all around

The strong and statistically significant relationship between FDI and the overall level of regulation as measured by *Doing Business* indicators supports the claim that *Doing Business* data reflect more about the overall investment climate than what matters only to small and medium-size local fi rms. These findings also support the more general claim that governments that regulate well in one area, such as domestic business, tend to also regulate well in other areas, such as foreign investment. For example, a working paper on transparency for this year's report highlights the positive correlation between a transparent approach to governance in one regulatory area and efficient regulation in other areas.

Comparing the *Doing Business* indicators with other measures of the regulatory environment also supports this perspective. For example, some *Doing Business* indicators are strongly correlated with similar indicators from the *Investing Across Borders* project, which focuses on regulation of foreign direct investment. The correlation between the distance to frontier measures of the 2 sets of indicators is 57%.

This general relationship also holds for comparable individual indicators from *Doing Business* and *Investing Across Borders*. The correlation between the complexity and cost of starting a local company as measured by *Doing Business* and the complexity of starting a local subsidiary of a foreign firm as measured by *Investing Across Borders* is 81%. This correlation does not imply that the level of complexity is identical, however—indeed, while it takes 8 procedures and 26 days on average to start a local business in the economies covered by *Investing Across Borders*, it takes 10 procedures and 41 days on average to start a foreign-owned company in those economies.

Conclusion

This case study presents evidence of a significant correlation between the *Doing Business* indicators and flows of FDI. Although this does not imply causation, the findings do support the claim that *Doing Business* reflects more about the overall investment climate than what matters only to small and medium-size domestic fi rms. More definitive conclusions about the relationship between *Doing Business* indicators and FDI will require more refined research. One initial step could be to disaggregate FDI by sector—for example, to compare the effect of business regulations on manufacturing FDI with their effect on resource extraction FDI. If such research supports the association between regulatory quality as measured by *Doing Business* and the size of FDI flows, government officials and business analysts will have even stronger justification for claims that better *Doing Business* rankings should attract more FDI.

References:

Blonigen, B. and Piger, J., 2014. Determinants of foreign direct investment. Canadian Journal of Economics, 47(3): 775-812.

Busse, M. and Groizard, J., 2008. Foreign Direct Investment, Regulations and Growth. The World Economy, 31(7): 861-886.

Haidar, J., 2009. Investor protections and economic growth. Economics Letters. 103(1): 1-4.

Haidar, J., 2012. The impact of business regulatory reforms on economic growth. Journal of the Japanese and International Economies, 26(3): 285-307.

Javorcik, B. and Wei, S., 2000. Corruption and composition of foreign direct investment: firm-level evidence," NBER Working Papers 7969.

Wagle, S., 2011. Investing across borders with heterogeneous firms: do FDI-specific regulations matter?, Policy Research Working Paper Series 5914, The World Bank.

Walsh, J. and Yu, J., 2010. Determinants of foreign direct investment: A sectoral and institutional approach. IMF Working Paper WP/10/187.