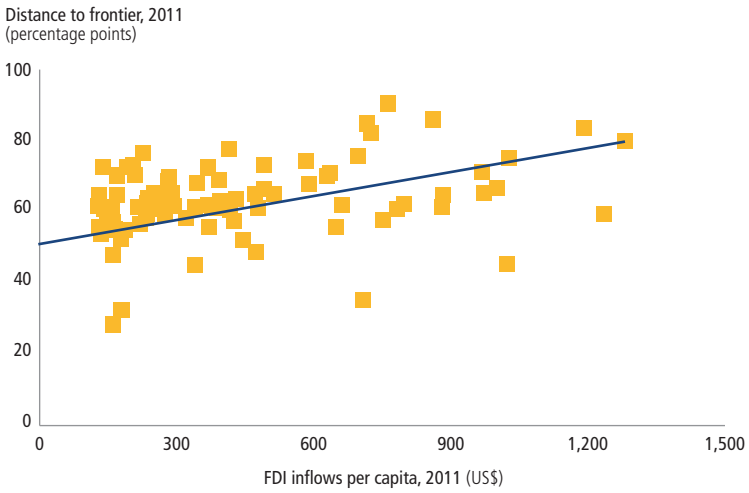
FIGURE 7.1 Better overall regulation is correlated with more FDI inflows per capita



Note: The distance to frontier measure is normalized to range between 0 and 100, with 100 representing the best performance (the frontier). Sample includes 157 economies with positive 2011 FDI inflows per capita of $1,500 or less. This includes all economies covered by *Doing Business 2012* for which data are available, excluding outliers with negative inflows or inflows greater than $1,500 per capita. Dropping these outliers does not significantly affect the trend line.

Source: Doing Business database; United Nations Conference on Trade and Development, UNCTADstat database.

graphically, using a different measure of FDI: it shows that 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.[2]

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.[3] 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.[4] 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.[6]

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 inflows[7]—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.[8] 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.[9]

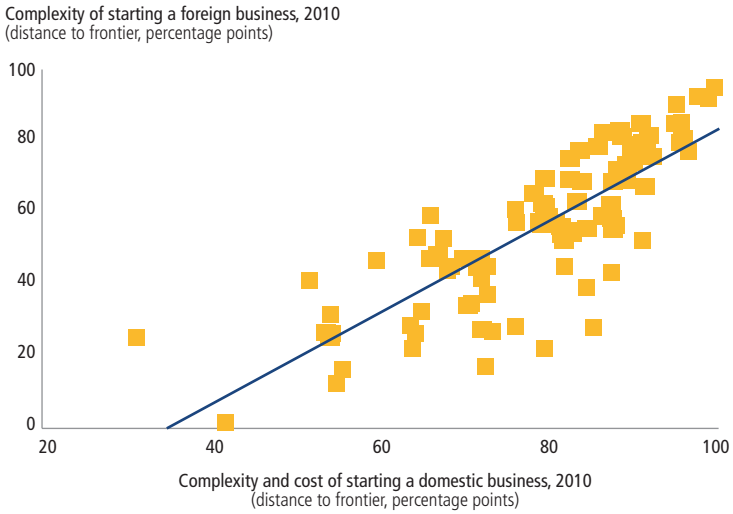
WHAT DO THE DATA TELL US?

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,[10] 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.[11]

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* reforms are associated with greater domestic investment and GDP growth,[12] supporting the general finding that reforms that improve the quality of the regulatory environment are positively associated with FDI inflows.

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 significant 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.[13]

FIGURE 7.2 Complexity and cost of starting a domestic business are strongly correlated with complexity of starting a foreign one



Note: Figure plots the distance to frontier in starting a (domestic) business as measured by *Doing Business* and the distance to frontier in starting a foreign business as measured by *Investing Across Borders*. The distance to frontier measure is normalized to range between 0 and 100, with 100 representing the best performance (the frontier). Scores are shown for the 92 economies for which *Investing Across Borders* collected data in 2010.

Source: Doing Business database; *Investing Across Borders* database.

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 firms. 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.[14]

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.[15] 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* (figure 7.2). 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%.[16] 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.