

Does *Doing Business* matter for foreign direct investment?

2007 2012 2011
2005 2009 2004
2008 2006 2010 2013

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 firms. 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 2011,¹ table 7.1 shows that 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. Figure 7.1 demonstrates this

TABLE 7.1 Average FDI inflows and stocks by tiers of economies grouped by their distance to frontier, 2011

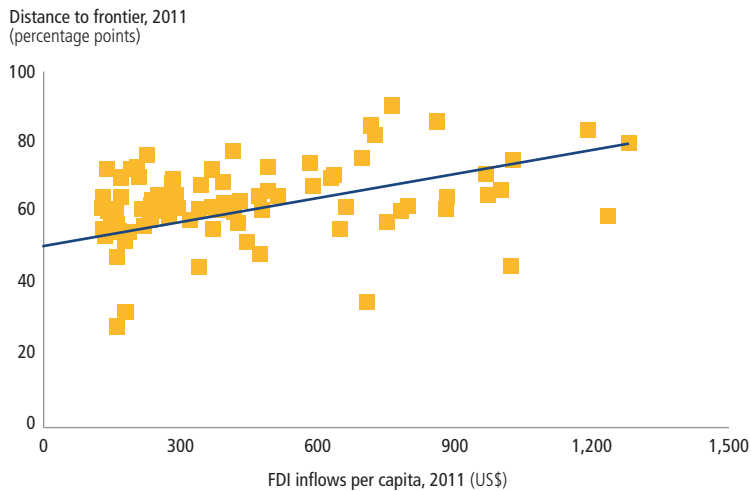
Economies grouped by distance to frontier	Average FDI inflows (US\$ millions)	Average FDI stocks (US\$ millions)	Average distance to frontier (percentage points)
Top 10	50,384	768,496	86.0
Middle 10	14,362	89,776	58.9
Lowest 10	1,257	8,179	34.2

Note: The distance to frontier measure is normalized to range between 0 and 100, with 100 representing the best performance (the frontier).

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

- Even though *Doing Business* indicators focus on small to medium-size domestic firms, many policy makers have associated improvements in the indicators with greater inflows of foreign direct investment (FDI).
- Cross-country correlations show that FDI inflows are indeed higher for economies performing better on *Doing Business* indicators, even when taking into account differences across economies in other factors considered important for FDI.
- Results suggest that on average across economies, a difference of 1 percentage point in regulatory quality as measured by *Doing Business* distance to frontier scores is associated with a difference in annual FDI inflows of \$250-500 million.
- Although this correlation does not imply causation, the evidence suggests that *Doing Business* reflects more about the overall investment climate than what matters only to small and medium-size domestic firms.
- In particular, these findings support the claim that economies that provide a good regulatory environment for domestic firms tend to also provide a good one for foreign firms.

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 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.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

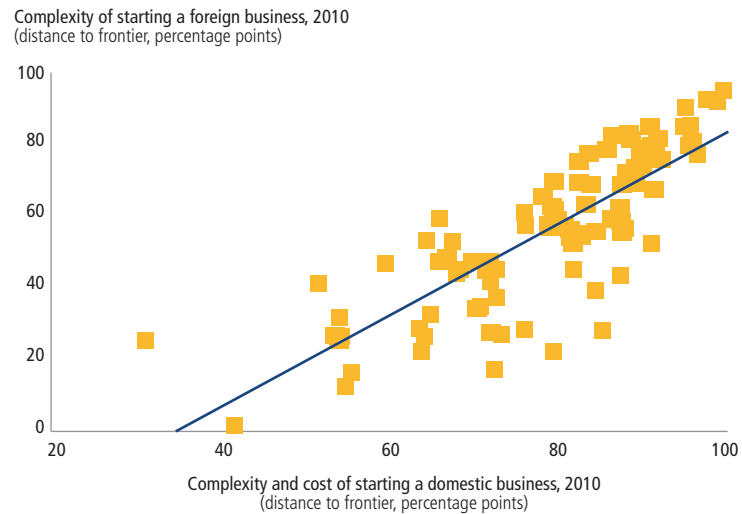
WHAT DO THE DATA TELL US?

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

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.

be associated with a 21% increase in its annual FDI inflows.¹³

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.

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 firms. 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.

NOTES

This case study was written by John Anderson and Adrian Gonzalez.

1. The *Doing Business* indicators can be aggregated in multiple ways to create composite measures of the investment climate. One approach is the ease of doing business index, which ranks economies from 1 to 185. Another is the distance to frontier, which measures how far an economy is from the most efficient practice or highest score achieved by any economy since 2005 for each *Doing Business* indicator. This case study uses the distance to frontier measure to capture not only how an economy ranks relative to others but also how far it is from the most efficient business regulatory practices identified by *Doing Business*. For more details, see the chapter on the ease of doing business and distance to frontier.
2. For an overview of such studies, see, for example, Blonigen and Piger (2011); and Hornberger, Battat and Kusek (2011).
3. Walsh and Yu 2010.
4. Wei 2000.
5. Desai, Foley and Hines 2003.
6. Waglé 2011.
7. Jayasuriya 2011.
8. This suggests that the results may be driven by differences between higher- and lower-income economies, not by variation within groups of economies.
9. Busse and Groizard 2008.
10. Jayasuriya 2011.
11. Jayasuriya (2011) estimates the influence of *Doing Business* rankings across 84 economies, noting that this smaller sample of economies is due to the use of an unbalanced panel.
12. See, for example, Eifert (2009); and Haidar (2012).
13. These calculations were made using distance to frontier scores for 2009 and data on FDI inflows in 2010 from the United Nations Conference on Trade and Development's UNCTADstat database. The calculation for Costa Rica uses a lower-end estimate of \$300 million in FDI flows being associated with a 1 percentage point difference in the distance to frontier score.
14. Geginat, Gonzalez and Saltane 2012.
15. The *Investing Across Borders* database launched by the World Bank Group in 2010 presents indicators of FDI regulation across economies. The *Investing Across Borders* indicators referenced in this case study are based on data for 87 economies published in the 2010 *Investing Across Borders* report plus 5 additional economies for which data were collected but not included in that report.
16. This correlation is calculated between the distance to frontier in starting a business as measured by *Doing Business* and the distance to frontier in starting a foreign business as measured by *Investing Across Borders*, the same data as those shown in figure 7.2.